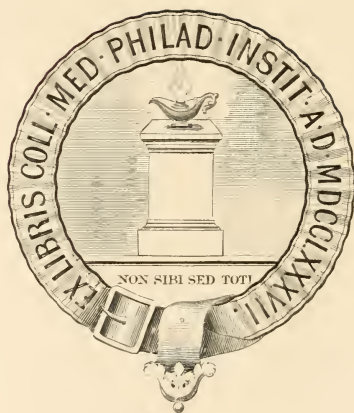


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THE
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MEDICINE AND SURGERY.

EDITED BY

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THE AMERICAN PRACTITIONER.

JANUARY, 1879.

Certainly it is excellent discipline for an author to feel that he must say all that he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

Original Communications.

THE IODIDES OF CINCHONIDIA AND QUINIA CHEMICALLY AND THERAPEUTICALLY CONSIDERED.

BY JOHN VANSANT, M. D.

Surgeon United States Marine Hospital Service.

If one examines the index to that mine of pharmaceutical, chemical, and therapeutical knowledge, the *United States Dispensatory*, no mention will be found made therein of iodide of quinia, or of iodide of cinchonidia, but “iodide of sulphate of quinia (note),” and “iodo-cinchonia sulphate (note),” will be observed as I have quoted. On reference to the proper page, an account can be read of those remarkable compounds of the alkaloids of cinchona with iodine and sulphuric acid, discovered by Dr. Herapath, of England, and called artificial tourmaline, from their notable influence in polarizing light like that mineral; but there is no notice of any simple iodide of these alkaloids, and I have not observed any such notice elsewhere. The artificial tourmaline is in crystals of an emerald green color, insoluble in water or cold dilute alcohol, and

contains, as just stated, the elements of quinia and sulphuric acid combined with iodine.

I have recently succeeded in isolating and analyzing two distinct combinations of iodine with cinchonidia, and also corresponding combinations with quinia.

For about three years past, I have been using with remarkable success, in a great number of cases of malarial, rheumatic, and constitutional syphilitic diseases, a combination of equal parts of quinia or cinchonidia sulphate, citric acid, and iodide of potassium, dissolved in pure water; two grains of each of the solid ingredients being given at a dose, and this repeated three or four times daily. I have also, during that period, given the formula to many medical friends, who have uniformly reported favorably on its activity as a therapeutic combination.

My attention was first directed to this matter by the following circumstance: A seaman, suffering from tertian intermittent and secondary syphilis, presented himself at the Marine Hospital office, in New Orleans, where I was then (three years ago) stationed, and asked relief. I wrote a prescription containing quinia sulph., potas. iodid., dilute sulphuric acid, and water, and sent it to an apothecary to be compounded. Soon the patient brought back the bottle of medicine to me, saying it had turned nearly black and he was afraid to take it. I found a copious, dark, brownish-red precipitate, about one-fourth of an inch thick at the bottom of the vial, and, on shaking the latter, all the fluid became opaque and blackish from the mixture therewith of the fine sediment. This deposit, the patient said, began to occur soon after he left the apothecary's shop, though the medicine was clear and of a pale amber color when he received it, and he had added nothing to it, neither had he done anything to it except carry it in his pocket and set it aside at his home. I was somewhat puzzled to know what the precipitate was. At first I thought it was iodine; but then, as there was an excess of iodide of potassium in the solution, this should have dissolved any free iodine, and closer examination and a microscopic inspection

showed it was not iodine, though in some respects it behaved like that substance would, for it was soluble in alcohol, and gave a violet color with starch-water, and a very small quantity of hyposulphite of sodium added to the darkened medicine cleared it up.

Another similar prescription was given, and I visited the apothecary to see what was the cause of the precipitation; but he could shed no new light on the subject. I found that the water employed had something to do with it, for when *distilled* water was used the discoloration was much slower in appearing, but finally it did occur, sometimes after a day or two. As the remedy proved exceedingly efficient, I made a number of experiments to find a mode of combining the cinchona alkaloids and potassium iodide in solution so that no precipitation should occur, and finally found that by using *citric acid* and *pure water* this could be effected.

When to a solution of equal weights of sulphate of cinchonidia and citric acid in a sufficient quantity of water, a like weight of iodide of potassium is added, a notable change at once occurs in the solution, which assumes a pale yellow color, and the beautiful blue fluorescence at once disappears; the liquid, however, still turns the plane of polarized light to the *left*, as it did prior to the addition of the iodide of potassium. The solution now contains *prot-iodide of cinchonidia*— $(C_{40}H_{24}N_2O_2I)?$ —sulphate and citrate of potassium, and some undecomposed iodide of potassium, and citric acid; and, by careful evaporation, a solid mass can be obtained consisting of the above-mentioned constituents. If this be pulverized and then washed in a small quantity of ice-cold water, the salts of potassium and the citric acid can be removed, and but little of the prot-iodide of cinchonidia will be dissolved, as the latter is slowly soluble in cold water. Sometimes, when a large quantity of a nearly saturated solution of the prot-iodide of cinchonidia, containing also the potassium salts and acid just named, has been kept standing for a long time, several months, a considerable deposit of the pure prot-iodide may be found on the bottom of the containing bottle.

This deposit seems to the naked eye formed of small, granular, adherent, opaque masses, of a semi-crystalline character, and sulphur-yellow color; but viewed with a microscope by reflected light, the small nodules are seen to be composed of a great number of minute hexagonal prisms, sharpened at the ends, and grouped together in the form of a rosette, making a beautiful specimen for preservation. It is not freely soluble in cold water, but hot water dissolves it readily, and it is not precipitated on cooling; it is also soluble in alcohol. Its solution is neutral to test-paper; it is odorless, but is intensely and peculiarly bitter to the taste; it produces no discoloration in solution of starch. I at first thought it probable that this deposit was a double iodide of cinchonidia and potassium; but when a portion of it was carefully heated on platinum foil over a spirit-lamp, it melted, turned dark, emitted fumes, swelled up, becoming a porous mass of charcoal, which finally entirely disappeared under continued heat, leaving no ash or residuum.

The absence of potassium was also proved by adding tartaric acid to a solution of the yellow deposit in dilute alcohol, when no precipitate of bitartrate of potassium occurred.

When chlorine water was added to a watery solution of this deposit a copious dark brownish-red precipitate was produced, the *bin-iodide of cinchonidia*— $(C_{40}H_{24}N_2O_2I_2)$?—which, being filtered out, and water of ammonia added to the filtrate, a slight opalescent cloud, quickly dissolving, was formed, showing that only a very small quantity of cinchonidia in the form of prot iodide remained in solution unchanged into bin-iodide. This dark red bin-iodide is also precipitated when Labarraque's solution, *liquor sodæ chlorinatæ*, is added to a solution like the last mentioned of the pure prot-iodide, or to the medicinal formula containing sulph. cinchon., acid citric, and pot. iodid. in solution with water. The chlorine, in these cases, taking up part of the cinchonidia, leaves two equivalents of iodine to combine with the remaining cinchonidia. The bin-iodide can be formed, too, by adding more iodine, in the form of

comp. tinct. iodine, to a watery solution of the yellow prot-iodide of cinchonidia.

The prot-iodide can be produced equally well from a solution of the citrate of cinchonidia, by the addition of potassium iodide (thus excluding the elements of sulphuric acid); and the bin-iodide will be thrown down from such a solution by adding chlorine as before mentioned.

Bin-iodide of cinchonidia is a dark brownish-red powder, somewhat crystalline under the microscope, insoluble in cold water, or in solution of iodide of potassium, or citric acid; strong solution of soda decomposes it with deposit of cinchonidia; it is slightly soluble in boiling water, from which it is precipitated on cooling; it is soluble in alcohol cold or hot, and is slightly soluble in glycerine. Its taste is disagreeable and metallic, but less bitter than that of the yellow prot-iodide. It produces a violet tint when added in tincture to starch-water.

When the alkaloid quinia, or the officinal *quinia sulphas* of the pharmacopœia, is substituted for cinchonidia in the above described processes, similar reactions occur, though the resulting iodides of quinia are not precisely like those of cinchonidia. The *prot-iodide of quinia*, when first formed, has the appearance of a dense oily fluid, which gradually in the cold crystallizes into amber-yellow, transparent, acicular crystals, that melt at a temperature of about 100° Fahr., and are but slightly soluble in cold water, though freely so in hot. The solution turns the plane of polarized light to the *left*. The *bin-iodide of quinia* has also a crystalline character, and is of a darker red color than the similar cinchonidia iodide. The crystals are very small, irregularly adhering together, and their shape is difficult to determine. It is non-volatile, insoluble in water, but soluble in alcohol, and strikes a violet color with solution of starch.

In regard to the therapeutic value of these iodides, I can not speak positively as to that of the *bin-iodides*, as I have not tried them sufficiently, though there is reason to believe they

are very active; but of the great medicinal value of the *prot-iodide* of quinia, and of the corresponding salt of cinchonidia, I will offer unhesitating testimony. I have used the iodides of both these alkaloids in a very large number of cases—running into the thousands—and I can think of no remedy that is so useful in such a variety of maladies, and has proved in my hands so generally satisfactory, as the *prot-iodide of cinchonidia*. It is a most excellent tonic in debilitated states of the system arising from many causes; and it is useful in all that large class of diseases in which quinia, or iodide of potassium, or both, may be required. The watery solution can also be used without decomposition in connection with other medicines in special cases when desired, as for instance in combination with a small quantity of tincture of colchicum or of aconite, in rheumatism or neuralgia; with iodide of potassium in syphilis; with tincture of opium or solution of morphia, in diarrhea and dysentery; or with tartar emetic and morphia, in pneumonia or bronchitis. In malarial fevers I think it more efficient and prompt than twice the weight of any of the alkaloids of cinchona, combined and administered as they usually are.

I will just add the prescription I usually give, and recommend it to the profession generally for trial.

℞ Cinchonidiæ sulph.,	}	āā 1.5 gram, (about grs. xxiii.)
Potassii iodidi,		
Acidi citrici,		
Aquæ distil., . . .		
		175 C. C. (about f ̄ vss.)

Dissolve the cinchonidia and acid in the water, then add the pot. iod. and agitate.

Sig. Dose, a tablespoonful in water, three or four times a day.

CINCINNATI, OHIO.

THE ANTIPYRETIC TREATMENT OF TYPHOID FEVER.*

BY G. C. SMYTHE, M. D.

In this paper I shall consider the treatment of typhoid fever by cold baths and large doses of sulphate of quinia; and present the history of some cases I have treated by these means only. A brief historical reference to the use of cold water as a therapeutic agent will be appropriate at the outset.

Cold water has been used in various ways in the treatment of typhoid fever and other maladies from time immemorial, but it is only recently that the subject has received that attention its importance demands. Water was used externally for the treatment of acute diseases, and more especially fevers, by Hippocrates, two thousand three hundred years ago; and indeed this, with a well-regulated diet, and a firm reliance on the "*vis medicatrix naturæ*," with the use of comparatively few drugs, seems to have constituted his chief therapeutics. In Horace we find mention of Antonius Musa, physician to the Emperor Augustus, as a hydropathist. He succeeded in curing the emperor of a long and severe disease, the nature of which is unknown, by cold bathing; but unfortunately the same treatment applied to the case of the young prince caused his death. Both Galen and Celsus, in their writings, speak highly of water in the treatment of fevers; and all through the Middle Ages many renowned physicians, such as Ætius, Paulus Ægineta, and the more celebrated Paracelsus, the founder of the chemical school of medicine, were advocates of water in the treatment of acute, but not of chronic, diseases. There had been no work published, devoted exclusively to this subject, prior to A. D. 1723, when Nicoli Lanzani, a Neapolitan physician, produced a treatise of considerable merit for the period in which it was written; and about the

* Read before the District Medical Society of Western Indiana, at Greencastle, Ind., December 11, 1878.

same time, or perhaps a little earlier, Sir John Floyer and Dr. Baynard began to use water extensively in England, and published a joint work of considerable merit, denominated the *Psychrolousia*; and henceforth this branch of medicine had a literature of its own. The first scientific work on this subject was published in England in 1797, its author being Dr. James Currie, who recommended the use of cold affusions in typhus and other fevers, giving systematic and precise directions for their application.

Those writers whom I have mentioned, restricted the use of water to the treatment of acute diseases. As a matter of history the so-called hydropathic school of medicine does not claim, and is not entitled to, such great antiquity, since heretofore water had been used only by the regular profession and in conjunction with other therapeutic measures. The honor of originating the hydropathic school or system of medicine was reserved for a humble Silesian farmer, an uneducated man, although something of a genius, Vincent Priessnitz. He first treated himself and members of his own family with water, then extended its use to the poor of his neighborhood, devised a number of baths, prescribed exercise, diet, fresh air, mental quietude, etc.; and finally in 1826 opened an infirmary or water-cure establishment in Grafenberg. There in twenty years he treated seven thousand five hundred patients with only thirty-nine deaths, if his statistics are to be believed, and they seem to be certified to by the Austrian police registry. My own opinion is that, like some more modern water-cure establishments, he must have sent all his patients home to die who were able to travel.

During the succeeding twenty years the use of water as a therapeutic agent passed almost entirely into the hands of quacks and ignorant pretenders, who, incapable of making scientific observations, opened up water-cure establishments in various parts of this country and in Europe. The first established in this country were in New York City and the State of Vermont, a little over thirty years ago. Meantime, the attention of scientific physicians was directed to this subject, especially

in Germany, and such men as Niemeyer, Hallman, Ziemssen, Liebermeister, and others, rescued this valuable therapeutic agent from the hands of charlatans, and gave it its proper place in our armamentarium.

In the therapeutic application of cold water, we have to deal with an agent of great power—one that will do much harm if not well understood, or if not rightly applied. An agent that will reduce the temperature in febrile states four or even six degrees in ten or fifteen minutes, accomplishing this by the actual abstraction of heat, and not by arrest of chemical changes by which the increased heat is caused, is not a mere toy for the amusement of the patient while nature cures the disease.

To those who have not used the remedy, but intend doing so, allow me to urge the importance of first studying the subject well; because improper application of the remedy will bring unjust reproach upon it, and disappointment to him who uses it, while he alone should bear the blame. The most complete discussion of the whole subject is found in the first volume of Ziemssen's *Cyclopædia*, under the head of Typhoid Fever, by Liebermeister: that paper deserves the most careful study—it is worth the price of the entire work.

In the antipyretic treatment of typhoid fever, cold water and quinia are all-important. But in using them, it is essential that we should be constantly guided by the revelations which the thermometer furnishes. It is the sentinel ever-watchful that sounds the first note of alarm, and indicates to cold water and quinia when and how to perform their work: it tells us, too, sooner than any symptom, when the patient is safe. This instrument is to the medical practitioner what the compass is to the mariner; and although he may coast around in the rear of progressive medicine successfully without it, he dare not plunge boldly forward into the front ranks of the profession, any more than the mariner would dare to explore the mysterious realms of old Neptune without his compass. A physician, in the treatment of typhoid fever without a clinical thermometer, is like a ship in a storm without pilot,

rudder or compass, liable to be dashed to pieces on every breaker, stranded on every beach, or forever lost in the fog. No physician, in the treatment of acute febrile diseases, can do justice to his patients without the daily or hourly use of this instrument; and although the attention of the profession was called to its value a century and a quarter (1754) ago, by Dr. Antonius de Haen, the first teacher of clinical medicine at Vienna, it was suffered to fall into disuse until quite recently. Its restoration promises to be of more advantage to the profession than any discovery of the century. It will lead us out of the darkness into the light, make crooked things straight, and cause us to travel by ways we know not as yet.

Twenty years ago quinia was proposed as a specific in typhoid fever, but a thorough trial has clearly shown that it has no power to cut the disease short, at least in doses which are compatible with human life. Yet it has been established, beyond the possibility of a doubt, that for the lowering of the temperature it is by all means the most valuable article of the *materia medica*; but it must be administered with an unsparing hand and at the proper time of day, for no good whatever will be accomplished by small doses scattered throughout the twenty-four hours. It is folly to administer it in the morning in any doses, in order to prevent a rise of temperature in the afternoon, for it can not be done in this disease; the patient will suffer all the inconvenience of the remedy without any corresponding benefit. But, on the contrary, if administered in one full dose of from twenty to forty grains in the evening, *it will strike the morning remission with full force*; and the consequence will be that the temperature will nearly, if not quite, reach the normal, and be followed by a complete intermission of all the dangerous symptoms, this remission continuing from twelve to forty-eight hours, according to the obstinacy of the case or the period of the disease at which the remedy is administered, thus allowing time for reducing the temperature of vital organs, preventing congestions, inflammations and degenerations, so destructive to life in this disease. No harm has ever been known to result from the administration of these

apparently heroic doses. Prof. Liebermeister, at the hospital in Basle, has administered it in this way, frequently as much as forty-five grains at a dose, over ten thousand times, and not one instance has ever fallen under his notice where any permanent injury was done to the patient. I have given it in fifty grain doses myself, with no unpleasant symptoms following, as I shall show in a case reported at the close of this paper.

The antipyretic treatment of typhoid fever has been largely practiced throughout Germany and some other portions of Europe, both in hospitals and private practice, with the general result of reducing the mortality from twenty-seven per cent., which is the death-rate of this disease when treated upon the expectant plan, to about eight per cent. By rejecting the cases first treated on this plan before it reached its present state of perfection, and tabulating the recent cases only, the mortality is still further reduced, nearly touching three per cent., thus stripping one of the most formidable diseases with which we have to contend of nearly all its terrors, and reducing it to a comparatively mild and tractable malady.

It is almost universally conceded at present, by all investigators of this disease, that the greatest danger to be feared, and the one which is either the direct or indirect cause of death in a vast majority of cases, is *long-continued high temperature*. It may and does cause death directly by producing paralysis of the heart or brain; indirectly by producing congestions, inflammations and degenerations in important organs. The characteristic symptoms of typhoid fever disappear, or rather fail to appear, under the active and energetic application of this treatment; there is no muttering delirium, because the brain is kept cool, and is thus enabled to perform its function; there is no accumulation of sordes upon tongue, lips and teeth, because the secretions are restored with each and every remission produced by this treatment; tympanitis is never great, for the application of cold water causes the muscular coat of the intestines to contract and expel the

flatus; and the administration of quinia not only lowers the temperature of the body, thus restoring tone to the bowels, but gives the patient on the following day a diarrhea, during which large quantities of flatus and fecal matter that ought to be eliminated are expelled. This diarrhea is highly beneficial, and ought not to be interfered with, for it will cease of its own accord in a few hours. Hemorrhages and perforations are much less frequent under the antipyretic treatment, because the bowels do not become distended, and the ulcerated mucous membrane is not stretched and its capillaries torn by such distension. In fact all the symptoms of the disease are much modified, and some of them are entirely eliminated, by this plan of treatment.

If, then, we are compelled to recognize the fact that the greatest source of danger in typhoid fever is the long continued high temperature, we are necessarily forced to the logical conclusion that the first duty of the physician will be to reduce that high temperature to, or as near to, the normal as possible. Observation has taught us that a long-continued temperature of 102.5° will work more mischief to the vital organs, in the way of pathological changes, than a temperature of 105° F., which has a perfect intermission or remission of several hours each day. This being the case, it becomes an imperative duty *to produce these remissions*; and fortunately we possess the means by the systematic and proper use of cold-water baths, and the administration of large portions of sulphate of quinia: if these are rightly used, little or no other treatment is required.

As soon as the temperature in the axilla reaches 103° or 103.5° , the patient should be immersed in a full-length bath of cold water. I believe it is best to have the temperature of the water about ten degrees lower than that of the body of the patient, and after he has been in the bath two or three minutes to add cold water gradually until the temperature of the bath is reduced to about 70° . A bath administered in this way will require from fifteen to thirty minutes to reduce the temperature of the patient sufficiently to produce a

perfect remission; but it does not shock the patient so much as it does to plunge him into a bath the temperature of which is only 68° or 70° , as is recommended by some of our authorities on this subject. The latter bath, however, will abstract as much heat in ten, as the former will in twenty minutes. A bath administered in this way, and continued for a sufficient length of time, will lower the temperature of a patient from 105° to 100° or less; but do not imagine that much good will be accomplished with a few baths; for in obstinate cases, for the first few days of the disease, the temperature will be as high in two or three hours as before the bath was given.

The practitioner should himself superintend the inauguration of this treatment. If the administration of the bath be left to nurses, unless they have had previous experience, more harm may be done than good; for the baths stimulate the heat-producing functions of the body, and unless the abstraction is thorough, the one will counterbalance the effects of the other. Instruct the nurses exactly how this thing is done; teach them the uses of the clinical thermometer—leave one in the house, its use will be required almost hourly; show them how to temper the bath and cool it down, which must be done by rapidly drawing off the water as the body heats it, and turning in cold water. I have seen the temperature of the water in the bath-tub rise five or six degrees in less than that many minutes, so rapid is the abstraction of heat from the body. Nurses of ordinary intelligence will soon understand their duties.

These baths must be repeated every time the temperature of the patient's body rises above the dangerous point. It may require a dozen baths or more per day during the first few days, according to the obstinacy of the case. We are thus enabled to foretell, to a certain extent, the character of the case we have to deal with, materially aiding our prognosis thus early in the disease; for if we have a patient who, during the first week, has an extremely high temperature, which is controlled with great difficulty, we may confidently expect a severe case during the second and third week.

If, after using the baths as heretofore directed, the fever still maintains its obstinacy so as to require from eight to twelve baths per day, it will be well, on the evening of the second or third day, to administer a full dose of quinia—ten grains each half hour until thirty grains are taken. This amount should be taken in the evening, between the hours of seven and eight o'clock, so as to strike the morning remission with the full force of the remedy. If this quantity fails to bring the temperature below one hundred degrees, and hold it there for several hours, the dose must be repeated on the following evening, and increased to forty or forty-five grains if necessary. A full dose of quinia, taken in this way, will frequently lower the temperature to the normal, and the reduction lasts from six to twenty-four hours, or longer in the latter stages of the disease; and it is frequently unnecessary to use a bath at all during the next day, although during the first and second weeks one or two will be required between each administration of the quinia, accordingly as the disease is more or less obstinate.

It is impossible to conceive of a greater change than takes place in the appearance of a patient with typhoid fever, between the evening before taking a full dose of quinia and on the following morning. The disease is, for the time being, deprived of all those symptoms which we are accustomed to see. The low muttering delirium is gone; the hot dry skin of the previous evening is bathed in a profuse perspiration; the pulse of 120 is now down to 76 or 80, full and soft; the tongue has moistened in twelve hours, meteorism almost gone, etc. In fact, I have seen such a change in the appearance of the patient that an experienced physician might pronounce against the case being one of typhoid fever at all. It will not do to flatter ourselves, however, that the trouble is over, for it has scarcely begun. This amelioration of the symptoms will continue but a short time; perhaps it will not exceed six or eight hours after the first administration of the quinia. We ascertain the maximum dose required in any particular case on its first or second administration; afterwards

this quantity can be diminished. The same result will be accomplished and continue much longer, *with a much less quantity of the medicine*, and especially in the latter stages of the disease.

The question might be and has been asked, why not keep the patient under the influence of the drug and prevent the temperature from rising any more, and thus cure the case?

Extensive observations have shown that this can not be done. Quinia has no power to abridge the length of the disease; and as it, unlike the water, *acts chemically* and lowers the temperature by arresting molecular changes in the blood and tissues of the body, thus seriously interfering with the processes of nutrition and assimilation, the profound impression it makes should not be continued longer than one day at a time; it might become positively dangerous to life if continued too long or administered too often. The full benefit to be derived from it *is obtained by the remission it produces*—allowing the organism to cool off, and thus preventing serious organic lesions; consequently it is not advisable to administer this medicine, as a rule, oftener than each alternate day, and frequently during the latter days of the disease, it will not be required oftener than each third or fourth day, with an occasional bath in the afternoon.

Such, gentlemen, is a short sketch of the antipyretic treatment of typhoid fever, as it has appeared to me in my limited experience with it. We are indebted to the Germans for reviving and establishing this plan of treatment on a sound philosophical basis. It is the most rational, as well as the most successful, treatment that has ever been adopted in this fever, as is clearly shown by statistics. There are few conditions liable to arise contraindicating its use. Of course that degree of repose necessary in hemorrhage or perforation of the bowels, forbids its employment; fortunately neither of these conditions occurs as often under this as they do under the expectant plan of treatment.

When using the cold water and quinia jointly, I have seldom found any other treatment necessary. I usually pre-

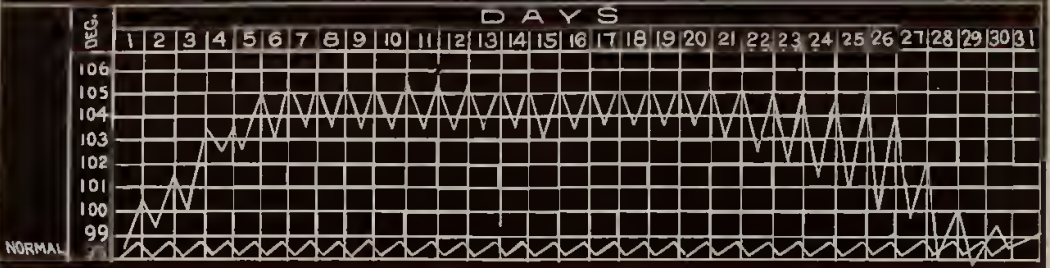
scribe, however, at the beginning of the disease, one or two ten-grain doses of calomel, a remedy which has become somewhat unfashionable in the United States in this disease; but it is a good one, and I am glad to see it recommended by such men as Niemeyer, Ziemssen, and other high authorities on this subject. I believe it exerts a favorable influence on the subsequent course of the disease.

My observation is limited in the use of digitalis or veratria, for the purpose of lowering the temperature in this disease, having succeeded satisfactorily with the agents heretofore mentioned. I have used the quinia treatment without the baths in ten cases, and the quinia and baths combined in eight cases—making a total of eighteen cases, with one death, which occurred after a second relapse in the case of a gentleman of rather delicate organization and over sixty-two years old. I shall close this paper with a report of some cases.

I have represented on the first diagram the normal temperature of the human body, with its diurnal fluctuations of a little less than one degree, Fahr.; and just above, the typical range of typhoid fever when uninfluenced by treatment; the other diagrams show the temperature, as observed almost hourly, of four cases of typhoid fever treated by myself upon the antipyretic plan.

CASE I. I was called Sept. 4, 1876, to see Miss M. R., a student of Asbury University, aged twenty-one years, of strongly-marked nervous temperament, healthy parentage, and possessing a good sound constitution. She had returned a few days before from a visit into the country, where she spent a day and night with a family who had been scourged with typhoid fever, and there was in the house at the time a patient not yet convalescent. On the day previous to my visit she had chilly sensations, followed by considerable fever, headache, pain in the back and limbs, and general muscular soreness; suppression of the menses two or three days previously; pulse 96, temp. 104° , respiration 20; tongue coated with yellowish-white fur; bowels rather inclined to constipation. I was not certain at that time that I had a case of typhoid fever; and in order to eliminate any malarious complication that might exist, I prescribed the following:

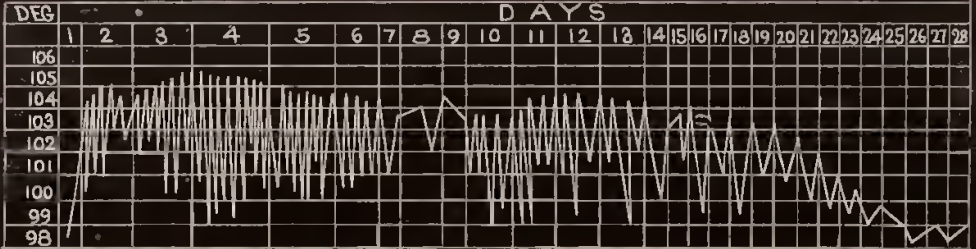
TYPICAL RANGE



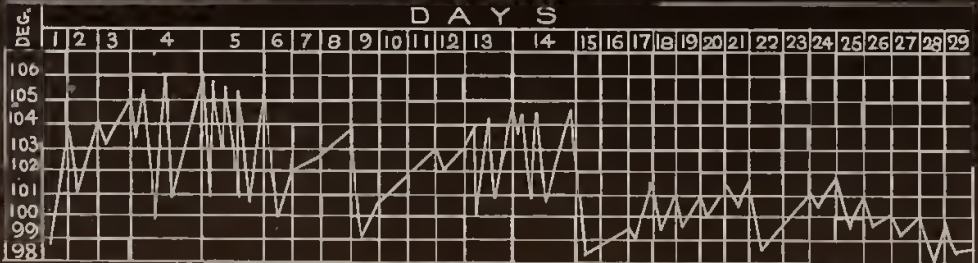
CASE N° 1



CASE N° 2.



CASE N° 3



CASE N° 4



℞ Quiniae sulph. ʒ iss
 Hydrag. subm. gr. vi
 Opii pulv gr. ii. M.
 Ft. chart. No. X. S.—One powder every two hours.

My first visit was made on the second day of the disease, and in this report, and those that follow, the day of the disease will be given, and not the day of the month.

Third day, morning.—Temperature 104° , pulse 100, resp. 18. Evening, temp. 105° , pulse 108, resp. 20; tongue dry; some muttering delirium; bowels moved freely from the effects of calomel. Ordered cold baths during the night, which reduced the temperature on the morning of the fourth day to $102\frac{1}{2}^{\circ}$, with a corresponding amelioration of the other symptoms; pulse 96, respiration 16.

The cold baths and affusions were used persistently, but not very successfully, all day and night on this day (the fourth), but owing to the obstinacy of the fever the temperature was not reduced at any time below $102\frac{1}{2}^{\circ}$; and by midnight it had reached 105° , pulse 130, resp. 28, with considerable delirium, excepting immediately after a bath, when the patient would be quiet and sleep for about an hour and a half; then as the temperature would rise above 103° , delirium would return, and a corresponding aggravation of all the symptoms.

This treatment was persisted in until the evening of the fifth day, she having been bathed about every third hour, when her temperature at 7 P. M. was $104\frac{3}{4}^{\circ}$, pulse 120, resp. 22. Between 7 and 8 P. M. she was given three ten-grain doses of quinia, which reduced her temperature by 7 A. M. of the sixth day to 101° , pulse 88, resp. 18, tongue moist, profuse perspiration; expressed herself as feeling very comfortable; bowels moved several times during the day, as the effect of the quinia. Her temperature gradually increased during the day as the effect of the quinia wore off, and at midnight it was $103\frac{1}{2}^{\circ}$, pulse 104, resp. 20. One bath would now keep the temperature down for about four hours.

On the morning of the seventh day her temperature was $102\frac{1}{2}^{\circ}$, pulse 96, resp. 20. Temperature manifested a disposition to rise, but by persistent bathing it was kept within bounds and gradually reduced, until the forenoon of the eighth day it was $101\frac{1}{4}^{\circ}$; but it ascended rapidly during the day until the afternoon, when it reached the dangerous point of $105\frac{3}{4}^{\circ}$, with an aggravation of all the symp-

toms; pulse 136, resp. 26; tongue very dry; almost continuous delirium, considerable tympanitis, very restless, etc.

This was the first case in the family, and the nurses at this time had not learned how to apply the treatment as well as they did subsequently, and the patient being a young lady I could not superintend the administration of baths in person, the consequence was that the reduction of temperature during the next forty-eight hours was far from satisfactory. The quinia she had taken on the evening of the fifth day had exhausted its influence, and consequently it was a hand-to-hand fight between the fever and the water during the night of the eighth day, and also the entire ninth and until the afternoon of the tenth day. Owing to the inefficient way in which the baths were administered, the temperature of the patient's body steadily maintained itself at the dangerous height of 104° to $105\frac{3}{4}^{\circ}$, with a corresponding aggravation of all the dangerous symptoms—pulse 148, resp. 40, tongue very dry, tympanitis increased, constant incoherent muttering; in fact, I regarded the case at this time as one of great danger, death being liable to occur at any time from paralysis of the heart or brain. The extreme weakness of the heart's action forbade the further use of cold baths; something had to be done; without a reduction of temperature, death would have closed the scene in the next forty-eight hours. I accordingly, beginning at 7 o'clock, P. M., administered ten grains of quinia every half hour, until the patient had taken forty grains, which caused a gradual lowering of her temperature and improvement in all her other symptoms during the remainder of the tenth day. This improvement continued during the eleventh, and on the morning of the twelfth day, at 6 o'clock, her temperature was $99\frac{1}{2}^{\circ}$, pulse 80, resp. 18, tongue moist, skin bathed in a profuse perspiration; slept quietly without delirium; usual diarrhea after taking quinia, with discharge of large quantities of offensive flatus and consequent diminution of tympanitis.

The twelfth and thirteenth days were passed in comparative comfort; the temperature gradually arose until the evening of the thirteenth day, when it reached 104° ; thirty-two grains of quinia were administered. This was followed, on the morning of the fourteenth day, by a reduction of the temperature to 100° . Other symptoms improved in a corresponding ratio. This day passed comfortably, with natural remission on the morning of the fifteenth day of nearly two degrees, but it arose during the day to 103° . Thirty grains of

quinia were administered in the usual way at 7 P. M.; and on the morning of the sixteenth day the temperature was normal, pulse 76, resp. 18, with all the symptoms ameliorated.

The patient remained comfortable during the sixteenth and seventeenth days; the temperature gradually rising until the evening of the seventeenth day it was $103\frac{3}{4}^{\circ}$, pulse 116, resp. 22. Twenty grains of quinia were administered, and the temperature declined under its influence all day on the eighteenth, and until the morning of the nineteenth day, when it reached $100\frac{1}{4}^{\circ}$, with the usual amelioration of all the symptoms. During the day the temperature arose to $100\frac{3}{4}^{\circ}$, but receded of its own accord. On the twentieth and twenty-first days it gradually increased to $103\frac{1}{2}^{\circ}$, with the same aggravation of the symptoms that always accompany an elevation of temperature in this disease. On the evening of this day twenty grains of quinia were again administered, and for the last time in the case. On the morning of the twenty-second day her temperature was again normal, pulse 72, resp. 18, profuse perspiration, etc.

This practically ended all danger in this case. During the fourth week of this disease, the fever becomes remittent of its own accord, if no organic lesions have been produced by the high temperature of the first, second and third weeks. This patient's temperature was $102\frac{3}{4}^{\circ}$ on the twenty-third day, $102\frac{1}{2}^{\circ}$ on the twenty-fourth and twenty-fifth days, on the twenty-sixth it was below the normal, on the twenty-seventh $101\frac{1}{2}^{\circ}$, and on the twenty-eighth $99\frac{1}{2}^{\circ}$, after which it remained at the normal.

I believe it is the imperative duty of medical men to point out their errors, so that others may profit by, and avoid, them in similar cases. A serious blunder was committed in the treatment of this case, which came near proving fatal. The quinia which was administered on the evening of the tenth should have been given on the eighth, and certainly not later than the evening of the ninth day; but I had such unlimited confidence in the efficacy of the water to produce a remission, that I omitted the quinia, and the consequence was a period of great danger to the patient. It is my opinion that this patient could not have survived longer than the thirteenth or fourteenth day without a remission.

CASE II. A brother of the preceding patient, also a student, with similar temperament and constitutional peculiarities, nineteen years of age, was taken sick on the 8th day of October, 1876, about one month later than his sister. I saw him on the morning of the

second day. No valuable time was lost in making a diagnosis, or squandered on expectant or other plans of treatment. This patient was one of more than ordinary intelligence, and fully appreciated the situation. I informed him that, owing to the fact that his temperature had reached $104\frac{1}{2}^{\circ}$ on the morning of the second day, his case in all probability would be an unusually severe one, and might not be altogether free from danger. The antipyretic treatment had been explained to the family during the sickness of Case No. I, but indifferently practiced, however, so far as the baths were concerned. It made a favorable impression on the mind of the patient about to be treated, and he was anxious to have it tried in his case. It was accordingly begun without delay. No account is taken of any other symptom than the temperature in this case. It was the sole guide in the application of all therapeutical means used during the treatment of the case.

The patient was accordingly immersed in a full-length cold-water bath at 8 A. M. on the second day of his attack, which reduced his temperature to $100\frac{1}{4}^{\circ}$. At 10 A. M. his temperature had risen to $104\frac{3}{4}^{\circ}$, when the bath was repeated, reducing his temperature to 101° . This operation had to be repeated several times during the day, and continued systematically throughout the third, fourth, fifth and sixth days, as often as the temperature arose to a dangerous point. It required on the third day six, on the fourth day nine, on the fifth day seven, and on the sixth day four baths to keep the patient sufficiently cool to prevent disaster.

On the evening of the third, the entire fourth, and part of the fifth days, the temperature was above 105° , touching $105\frac{3}{4}^{\circ}$ at one time, notwithstanding the vigorous manner in which it was combated with the cold water—having taken, up to the evening of the sixth day, thirty-one baths. On the evening of this day, when the temperature had reached $104\frac{1}{2}^{\circ}$, thirty grains of quinia were administered, which, on the morning of the seventh, had lowered the temperature to 101° ; and it gradually arose until, at 12 M. on the eighth day, it stood at 104° , when a bath was given, which reduced the temperature to 102° , but by evening it had again arisen to 104° . Twenty grains of quinia were now given the patient, which fully illustrates the folly of using inadequate doses of this drug for the purpose of lowering the temperature in this disease. This twenty-grain dose, although it prevented a rise in the temperature, was all day during the ninth reducing it one degree, and at midnight it was

$103\frac{1}{2}^{\circ}$, when the cold-water baths were resumed. During the tenth and eleventh, it required about one bath every six hours to keep the patient comfortable. On the twelfth and thirteenth, three baths were sufficient; and although the temperature arose on the eleventh, twelfth and thirteenth to about $104\frac{3}{4}^{\circ}$, as much good was now accomplished with three or four baths as was received from eight or nine during the first week. This was regarded as a favorable prognostic indication, showing a disposition on the part of the fever to yield somewhat in its obstinacy.

On the evening of the thirteenth, when the temperature had reached $104\frac{1}{2}^{\circ}$, thirty-five grains of quinia were administered to the patient, lowering the temperature to $100\frac{1}{4}^{\circ}$ on the morning of the fourteenth. During the day it gradually ascended, until the afternoon of the fifteenth it had reached $103\frac{3}{4}^{\circ}$, when another bath was given, which was the last required in the case. On the evening of this day, when the temperature was 104° , twenty-five grains of quinia were given the patient, which reduced his temperature to $99\frac{1}{2}^{\circ}$ on the morning of the sixteenth, but during the day it arose to $103\frac{3}{4}^{\circ}$. On the morning of the seventeenth a natural remission took place, which was regarded as the beginning of the end.

On the evening of this day, when the temperature was $103\frac{1}{2}^{\circ}$, fifteen grains of quinia were administered to the patient, which was the last medicine given in the case. The fever became distinctly remittent after this, receding about one degree per day, as shown on the diagram, until the twenty-sixth day it touched the normal to rise no more.

The results in this case may be considered typical of this plan of treatment. By glancing at the diagram, it will be seen that the range of temperature in the first and third cases, up until about the fourth day, is the same as it is in those cases which are treated upon the expectant plan; and those symptoms which are recognized as belonging to the *typhoid condition*, usually begin to appear from the fourth to the sixth day, and did so appear to some degree in those cases on account of the treatment not being properly applied, but in this case none of those symptoms ever appeared at all, which are caused by the persistent high temperature. He had no incoherent muttering, delirium or hallucinations; no sordes, nor much dryness of the tongue even; tympanitis was almost entirely absent; no diarrhea except what was caused by the quinia. In fact he could, at the time he convalesced and can now, relate every circumstance

that occurred during his sickness. It will readily be seen what a great advantage this is to both patient and physician. With a patient in the typhoid condition, the value of all subjective symptoms is lost; and unless the physician is an exceedingly close observer, he may lose his patient from some organic complication which was wholly unsuspected. Not so with the patient who retains all his faculties.

CASE III. was that of Mrs. F. McL., aged about twenty-six years, nervous temperament predominating; no hereditary taint in the family, but of rather delicate constitution herself; by occupation a teacher; had been visiting at Terre Haute, where she was probably brought in contact with the germs of the disease; was taken sick on July 29, 1877; and I saw her on the second day of her attack. She had been in rather feeble health for several weeks; had a chill the day previous to my being called, followed by fever; was suffering pain and general muscular prostration, also inclined to diarrhea. Morning temperature, 101° ; evening temperature 104° ; I was of the opinion at that time that the case might be malarious, as that form of disease was prevalent in the neighborhood, and consequently I prescribed calomel, opium and quinia, in the usual way for malarious difficulties. The prescription was continued to the evening of the third day. Morning temperature, 103° ; evening temperature, 105° .

I was pretty well convinced that I had a genuine case of typhoid fever to contend with, and began the antipyretic treatment at once. Cold water baths were used during the night of the third, and continued during the fourth and fifth days; and although the temperature did not rise as rapidly after each bath as it usually does in severe cases, it manifested no disposition to stop short of a very dangerous altitude, touching on two different occasions 106° , but notwithstanding this fact there was at this time no threatened paralysis of the heart or brain; the only aggravation of the symptoms in the case which seemed to be caused by the high temperature was the irritation of the stomach and bowels, which had existed in her case from the beginning; this was so great that during these two days I was compelled to use several hypodermic injections of morphia to quiet the patient. On the evening of the fifth day her temperature was $105\frac{1}{2}^{\circ}$, and knowing that this high temperature would very soon destroy her, and notwithstanding the quinia would add additional fuel to the diarrhea, I decided to take the chances in controlling the latter and gave the patient on the evening of this day thirty

grains, which lowered the temperature on the morning of the sixth day to 100° , with a great improvement in all the symptoms, excepting the diarrhea, which was not materially aggravated and was easily controlled by opium and nitrate of silver, which was the only treatment used during the sixth, seventh and eighth days. On the evening of the eighth day, when the temperature had risen to $103\frac{3}{4}^{\circ}$, thirty grains of quinia were again administered, and the temperature on the morning of the ninth had fallen to 99° . The diarrhea increased, but was easily controlled again with the same remedies; otherwise the patient was comparatively comfortable.

It will be seen, by looking at the diagram, that the temperature gradually rose during the ninth, tenth and eleventh days without any morning remission. This fact was the cause of no little alarm to me eight years ago, when I first began to study the thermometry of diseases. One of the first laws established by the thermometer was, that the danger is increased in any given case when the morning temperature is higher than the evening temperature; yet this is what I have invariably had after producing a remission with quinia. I call attention to this fact because I have never seen it mentioned in any authority on the subject. The law seems to be, that *the morning remission does not take place again after the administration of quinia until the fever heat approaches the point touched by the morning remission for that particular case when uninfluenced by treatment.* A confirmation of this law in all four of the cases represented on the diagram, will be noticed after each administration of this remedy.

There was a slight remission on the morning of the twelfth day, but the temperature continued to rise until the forenoon of the thirteenth day, when it stood at 104° , with an accompanying aggravation of all the symptoms, and the cold baths were resumed but proved to be very disagreeable to the patient; cold affusions were resorted to, but the temperature continued to rise until it was $104\frac{3}{4}^{\circ}$, with great irritability of the stomach and increase of diarrhea, with threatened paralysis of the heart; pulse 136, restlessness and slight delirium; ordered forty grains of quinia. This quantity was put up in eight capsules, two of which were to be taken every half hour. Part of this was rejected by the stomach as the patient vomited several times during the night, and two of the capsules were passed with the stools the next day; consequently there was no remission on the morning of the fourteenth, at least no more than takes place in cases that are uninfluenced by treatment of any kind.

The symptoms were all aggravated by the continued high temperature, and the case began to assume a serious if not a dangerous aspect. Pulse during the day ranged between 150 and 160, the tongue became very dry and brown, some sordes began to appear, considerable delirium was present, involuntary discharges and all that train of symptoms began to show themselves that go to make up the typhoid condition.

Owing to the weakened condition of the heart's action, further use of the cold bath was contraindicated. The cold affusions did not control the temperature, and with the present irritable condition of the stomach quinia would not be retained, and of course, with involuntary discharges from the bowels it was impossible to resort to injections, and the small quantity of quinia that can be administered hypodermically could have no influence in cooling a patient whose temperature had reached 105° ; yet death seemed inevitable unless a very decided remission could be produced. At 6 P. M. I gave hypodermically two-thirds of a grain of morphia, and one hour afterwards, when the patient was fully under its influence, I administered forty grains of quinia dissolved in brandy, and four hours subsequently an additional ten grains were given and fortunately it was all retained.

This looks like heroic practice, and will doubtless be criticized by some physicians who read this article; but my reply will simply be to ask them to look at the diagram, where will be seen as a result a lowering of the patient's temperature amounting to $6\frac{1}{2}^{\circ}$ degrees, and the patient removed from a condition of great peril and placed in a position of comparative safety. Let me ask if the end attained did not justify the means? If not, please point out some milder means which will be equally effective. I am a firm believer in conservative medicine; yet, I believe emergencies arise when nothing but the most active interference will save patients. I believe that this was one of those emergencies, and I further believe the time had arrived on the evening of the fourteenth day when the patient's life was in immediate peril, and that quinia saved her.

Thus all subsequent danger was eliminated from this case. The temperature never rose above $101\frac{2}{3}^{\circ}$ afterwards, and no other dangerous symptoms reappeared. It required until midnight of the sixteenth for the temperature to rise one degree. On the morning of the seventeenth there was a remission of one-half degree, and under the law governing the rise of temperature after the administra-

tion of quinia, this will be the point to which the morning remissions will descend in the future of this case. No further treatment was required in this case excepting a little opium and nitrate silver for a few days, and a creasote and chlorate of potassa emulsive as a muco-stimulant until the evening of the twenty-first day, when ten grains of quinia were administered, which closed the medical treatment of the case. The temperature became normal on the twenty-ninth day.

This patient, as did also the others, treated upon this plan, recovered without any sequelæ. She was able to resume her occupation as principal of the second ward school in thirty days after her dismissal from my charge.

CASE IV. I was called to see, on the 21st of September, 1878; Helen B., aged twenty-three months, a well-developed, healthy-appearing child; had been feverish and fretful for a day or so, but still able to be up and around; pulse about 120, tongue furred, some diarrhea; unable to ascertain her temperature on account of her peevish, fretful condition. I did not suspect the patient had typhoid fever at this time, although there had been some few scattering cases in the neighborhood during the preceding two years; prescribed calomel and quinia, and on the following day the symptoms were somewhat ameliorated. No violent symptoms were developed until the morning of the fourth day, when I visited her early in the day and for the first time took a satisfactory observation of her temperature and found it to be $105\frac{1}{2}^{\circ}$; at 7 A. M. she was immersed in a bath the temperature of which was 94° Fahr., and cold water gradually added until the temperature of the water was reduced to 78° . She was allowed to remain in the bath twelve minutes, when after being removed and dried her temperature was found to have been reduced to 100° . At 9 A. M. in just two hours her temperature had again risen to $105\frac{1}{2}^{\circ}$, when the process of bathing was repeated with a reduction of her temperature to 102° ; at 11:30 A. M. her temperature had reached 105° , when the bath was repeated, lowering the temperature to 101° ; at 3 P. M. her temperature had again risen to $105\frac{1}{2}^{\circ}$, which was lowered by the bath to $102\frac{1}{2}^{\circ}$; at 5 o'clock her temperature had reached 106° ; a bath continued fifteen minutes in which the temperature of the water was cooled to 76° , lowered her temperature to 100° ; at 7:15, however, her temperature had again risen to $105\frac{3}{4}^{\circ}$, but a repetition of the bath reduced it again to 100° —five grains of quinia were now ad-

ministered every ten minutes until fifteen grains were taken; at 6 A. M. on the fifth day the patient's temperature touched 98° without any symptoms of quininism and with a complete remission of all the unpleasant symptoms. During the fifth day the temperature gradually increased, at noon marking 100° , at 7 P. M. 104° ; no bathing required during the day, but between 7 and 8 P. M. four three-grain doses of quinia were given to the patient, which reduced her temperature on the morning of the sixth day to 100° . During the day her temperature gradually rose until 7 P. M. it had reached 105° . She was again immersed in a bath for twelve minutes, which lowered the temperature to 101° ; twelve grains of quinia were administered in the same manner as before. Her temperature rose slowly until about 11 P. M. it had reached $102\frac{1}{2}^{\circ}$, when under the influence of the quinia it began to recede, and on the morning of the seventh day it reached $99\frac{1}{2}^{\circ}$, but by noon of this day it had again risen to $104\frac{1}{2}^{\circ}$; another bath was administered which reduced it to 100° . During the afternoon it again rose to $104\frac{1}{2}^{\circ}$, when eleven grains of quinia were given the patient which reduced her temperature on the morning of the eighth day to 100° . At 4 P. M. her temperature was 105° which was lowered by the bath to $100\frac{1}{2}^{\circ}$; at 7 P. M. her temperature was again 105° , which was reduced by a repetition of the bath to 100° , when twelve grains of quinia were given in the usual manner; the temperature struggled up to $101\frac{1}{2}^{\circ}$ when under the influence of the quinia it began to descend, receding about one degree each hour until it touched $93\frac{1}{2}^{\circ}$ at 7 A. M. on the morning of the ninth day.

No symptoms of collapse followed or accompanied this enormous reduction of temperature, and no steps were taken or required to counteract this condition. The skin was cool and moist, respiration normal, and pulse 80, soft and full, and the patient slept quietly for several hours; the temperature arose rapidly and at 1 P. M. was $105\frac{1}{2}^{\circ}$, but was reduced by a bath to 101° . At 5 P. M. it had again reached 105° , which was lowered by another bath to 100° ; at 11 P. M. it had again reached $103\frac{3}{4}^{\circ}$, but receded without either bath or quinia until the morning of the tenth it stood at 100° .

During this day, owing to the fact that the patient was entirely from under the influence of quinia, the fever proved unusually obstinate and manifested a strong disposition to ascend to a dangerous altitude, touching on four different occasions 105° , and at one time $105\frac{3}{4}^{\circ}$, and requiring six baths to prevent disastrous

consequences. At 7 P. M., when the temperature was $105\frac{3}{4}^{\circ}$, a bath and fourteen grains of quinia were administered, the bath reducing the temperature to 102° , from which point it ascended to $104\frac{1}{4}^{\circ}$, where it met the influence of the quinia, from which it descended to 96° on the morning of the eleventh day without producing any unpleasant symptoms. During the day the temperature gradually ascended until late in the afternoon it reached $103\frac{1}{4}^{\circ}$, from which it descended during the night until the morning of the twelfth day it marked 98° . This remission took place without additional baths or quinia; by the afternoon of this day, however, the temperature touched at $104\frac{3}{4}^{\circ}$, when six grains of quinia were given. Morning temperature on the thirteenth day 100° ; evening temperature 104° . Morning remission on the fourteenth day, without treatment of any kind, $99\frac{1}{2}^{\circ}$; evening temperature, $103\frac{1}{4}^{\circ}$. Morning of the fifteenth day 100° , temperature in evening, $104\frac{1}{2}^{\circ}$; nine grains of quinia given. Temperature, on the morning of the sixteenth, $98\frac{5}{8}^{\circ}$.

No medicines were administered after the eighteenth day in this case, when the patient again had six grains of quinia which reduced the temperature to 97° on the morning of the nineteenth day, and although the temperature ran up sharply each evening until the twenty-eighth day, it subsided every day without treatment of any kind. No medicines of any sort were used in the treatment of this case, with the exception of two cathartic doses of calomel during the first week.

This case had no complication or sequelæ of any kind, and suffered no inconvenience from the quinia, although the necessities of her case seemed to demand it about twice as often as ordinary cases. Whenever her temperature rose to 104° she became drowsy and stupid, could be aroused with difficulty, and within an hour or so, if not cooled, off began to mutter and have subsultus, all of which, however, would subside as soon as she was cooled with the water and quinia.

I have selected this case from that of several children, in order to show that this treatment is as applicable to their cases as those of adults; and also to show the remarkable vacillations which may take place in the range of the temperature in children without danger—the temperature having fallen eleven and a half degrees in ten hours, and risen twelve degrees in six hours without a single alarming symptom, which could hardly be expected in the case of an adult.

SUMMARY.

First. The prevalent opinion that the group of symptoms which constitute what is known as the "*typhoid condition*," is caused by the persistent elevation of the temperature, in which the circulation is poisoned with the *débris* of broken down nitrogenous tissue, and also that this long-continued fever heat causes degenerations in the vital organs, or death from paralysis of the brain or heart, is in all probability the correct one.

Second. This being the case, the most important indication to be fulfilled *is to keep the patient cool*; and the hourly use of the thermometer is the most reliable guide in securing this end.

Third. Cold water baths and quinia are, by all odds, the most important therapeutical agents for lowering the temperature during the pyrexia. In the first week of the disease, and before quinia has been given, a bath may be required as often as every two or three hours. After the patient has been thoroughly cooled with the quinia, three or four baths per day will answer, and a still less number later in the disease. The "gradually cooled" bath seems to me preferable to any other.

Fourth. *Quinia* is the more valuable agent of the two, and can be used in all stages of the disease; while the baths seem to annoy some patients, especially during the third week and the latter part of the second. Frequently no other treatment is necessary for two or three days after a full dose of quinia. In the latter weeks of the disease, the amount of the remedy can be materially lessened. It always moves the bowels several times the day following its administration, lessening the tympanitis; and the unabsorbed portion thoroughly disinfects the discharges, thereby contributing largely toward preventing the spread of the disease. After a remission is produced by quinia, the temperature rises in accordance with a fixed law, attention to which is called in the body of the paper.

CASES IN OBSTETRICS.*

SPONTANEOUS EVOLUTION—CEPHALIC VERSION—PENDULOUS ABDOMEN.

BY G. W. H. KEMPER, M. D.

CASE I.—*Spontaneous Evolution*.—February 19, 1873, I was called in consultation by Dr. Day to see Mrs. A., in her fourth or fifth labor. I was informed by the doctor that the lady had been in labor but a few hours; that the membranes had ruptured but a few moments before my arrival, and revealed a shoulder presentation. The pains were strong. Patient in dorsal position.

Upon examination, I found the right shoulder presenting, head in left iliac region, and the back of the child directed forwards. While I was making the examination, the arm descended and the hand protruded through the vulva. Following in rapid succession, the thorax was detected, then the hip and finally the breech, while the arm remained in the vagina, and spontaneous evolution was accomplished. Labor was soon terminated, resulting in a medium-sized still-born fetus. The mother made a good recovery.

CASE II.—*Cephalic Version*.—October 24, 1878, I saw Mrs. M., in her second labor, which had begun on the previous day at 9 o'clock P. M. When I arrived at midnight (23d), although the pains were apparently strong, the os would barely admit the tip of the finger. I could not distinguish the presentation. At 5 o'clock A. M., the os was fully dilated, and I diagnosed a right shoulder presentation; head in left iliac region, and back of child forwards. I administered chloroform at once, preparatory for rendering assistance.

After rupturing the membranes, with my right hand in the vagina—the patient lying upon her back—I pushed up the shoulder; at the same time, with my left hand over the abdomen, I pushed the breech upward and toward the median

* Read before the Delaware District Medical Society, at Marion, Ind., December 17, 1878.

line of the mother. The maneuver was easily accomplished, and a pain coming to my aid, drove the head into the pelvis in the first position. Labor was terminated at half past six o'clock A. M., resulting in the birth of a medium-sized male. The mother and child both did well.

CASE III.—*Pendulous Abdomen*.—On December 7, 1878, at 11 o'clock P. M., Mrs. W., aged thirty-six years, was taken in labor with her sixth child. I saw her on the morning of the 8th at 6 o'clock. The pains were inefficient, and the os situated high up in the pelvis and but slightly dilated, although dilatable. When she stood erect, or lay upon her back, the contour of the abdomen was unique. The uterus lay in front of, and projected below, the pubic bones, so that it was difficult to perform the vaginal touch.

At 8 o'clock A. M., the os being well dilated, I ruptured the membranes and liberated a vast quantity of liquor amnii. I was able now to distinguish the right foot and left knee presenting. The belly of the child lay across the pubes, while the head rested over the upper part of the thighs. Of course in this position the uterus could exert but little force, and the abdominal muscles still less, in expelling the fetus. I kept the patient upon her back, and tightened a bandage about her abdomen. With one hand I drew upon the right foot, while with the other I pushed the head upward. After the breech had thoroughly engaged in the superior strait, the pains were strong, but no progress was made.

Upon examination I found the left leg and foot lying transversely across the pelvis was a hindrance to the advancing breech, and with some considerable force I seized and drew the foot beyond the vulva. Labor progressed rapidly after this operation, and at half past ten o'clock A. M. a large sized female child was born, and in a few minutes cried lustily.

The distorted shape of the uterus seemed to prevent it from grasping firmly the placenta, and after waiting an hour I was compelled to introduce my hand and detach it from the fundus, where it was strongly adherent. The patient's convalescence was normal.

This was my first attendance upon this lady. She informed me that of her five former labors three were breech or footling cases, and two were "crosswise"—probably shoulder presentations. Two of the children were still-born, and one died a few days after birth with convulsions. The placenta had only been adherent at the last labor.

MUNCIE, IND.

IS THE HYPODERMIC INJECTION OF PILES DANGEROUS?

BY EDMUND ANDREWS, M. D.

Professor of Surgery in the Chicago Medical College.

About two and a half years ago I discovered and published to the profession the secret method of the "pile doctors." The plan of these itinerants, which was sold as a secret, at a high price, from one quack to another, is substantially as follows: A hypodermic syringe, with a very fine sharp point, is charged with a strong solution of carbolic acid. Generally three parts of the crystalized acid to one of any bland oil, are employed; but sometimes they are combined in equal parts, and for oil is occasionally substituted glycerine. The method of the operation is to insinuate the point of the syringe into one of the piles, and throw in a few drops of the solution. Another one is then attacked, and thus by degrees a complete cure is effected without causing at any one time enough irritation to take the patient away from his business.

Attention was called to the seeming danger that carbolized oil might be thrown directly into the dilated hemorrhoidal veins. The injection of coagulants into venous enlargements of other parts of the body has, in a few cases, caused sudden death by embolism—a portion of the clots being carried to the heart, and from thence passing into and blocking the pulmonary artery. It was suggested, therefore, that the injection

of hemorrhoidal veins might involve a little of the same risk. The three groups of hemorrhoidal veins intercommunicate, but the main outlet of the lower and middle groups is to the internal iliac vein, and thence to the heart, while that of the upper is to the portal vein. It is conceivable that dislodged clots, or globules of the injection, might be swept by the current of the blood to the heart, or possibly might pass through the upper plexus into the portal vein, and be lodged in the liver.

I learn that a number of the itinerants have taken warning from my suggestion, and now employ a sort of clamp forceps to compress the base of the pile for a few moments at the time of the operation, thus hoping to prevent the passage of clots or globules along the veins. This method has now been in use over three years, and has been applied to thousands of persons. If there be any actual danger in it, such as is suggested by anatomy and by the experience of similar injections in other regions, the results should be manifest by this time. Experience only can settle such matters. If, on the other hand, the method is safe, it ought at once to be adopted by the regular profession as the best method of dealing with this distressing disease.

To settle this question of danger, I take the liberty, through the medium of this journal, of asking every physician in the United States, who has had opportunity to know the results of this treatment, to write me immediately, giving information on the following points:

1. How extensively has the plan been tried in your region?
2. Have any sudden deaths, or other alarming symptoms, been known to follow its application? If so, how soon and what were the symptoms?
3. Have any cases been followed by dangerous disease of the liver?

I propose to collate all the information thus gathered, and communicate the results in a future article in this journal.

ACUTE TUBERCULOSIS WITH FATAL HEMOPTYSIS—
ACUTE HYDROTHORAX AND EDEMA OF
THE LUNGS.*

BY J. C. MACKENZIE, M. D.

Professor of Physiology in the Miami Medical College, and Physician to the Cincinnati Hospital.

J. H., colored (mulatto); aged nineteen; railroad laborer; family history good; free drinker; had venereal ulcers on penis last May, no secondary symptoms; had dysentery one year ago. Present illness began three months ago with pain in abdomen and some swelling, accompanied by diarrhea, and followed by loss of flesh and strength; he was also troubled with cough and expectoration of white frothy sputa. These symptoms have persisted up to the present time. Admitted to the Cincinnati Hospital on August 15, 1878.

Condition on Admission.—A man of average size and fair development; somewhat emaciated; complains of pain in abdomen, which is swollen, tympanitic, and tender on pressure; pulse 96, rather weak; tongue pointed, red at edges, furred in the center; appetite fair; constant thirst; bowels loose; dullness on percussion beneath the left clavicle; auscultation negative. Ordered twenty drops of tincture of opium every three hours, and warm fomentations to abdomen.

August 16.—Morning temperature 102.2°, pulse 105; evening temp. 104°, pulse 96. Ordered fifteen grains of quinia, the opium and fomentations to be continued. Under this treatment the fever abated and the diarrhea became less severe; the tympanitis and abdominal pain and tenderness, however, continued about the same.

August 21.—Has great distension of the abdomen and pain; the pain is worse on the right side; no stool since the 18th;

* Reported to the Cincinnati Medical Society, January 7, 1879.

occasionally slight delirium; some cough; morning and evening temperature 101° , pulse 96; the tincture of opium was continued.

From this time the patient steadily improved; the fever entirely left him; the pain in abdomen and tympanitic condition gradually subsided; and during the month of September he was able to be up, walking about the ward, and even assisting the nurse in light work. The cough, however, never left him, and he took the tincture of opium occasionally to control it. About the beginning of October he began to lose his appetite and his strength failed; the cough, at the same time, became more troublesome; the diarrhea and abdominal tenderness returned.

October 6.—Pain in left side of abdomen; no abdominal distension; feels very weak; no appetite; bowels loose; cough very troublesome. Ordered one ounce of whisky and two drachms of cod-liver oil three times daily, and opium to quiet the cough. For the next two weeks he remained in much the same condition, except that the weakness increased, and he complained very much of the cough at night.

October 22.—A careful physical examination was made to-day. Over the whole anterior surface of the right side of the chest a friction murmur can be heard both with inspiration and expiration; and a similar sound is heard over the posterior surface, below the inferior angle of the scapula. Friction fremitus marked on the right side anteriorly. In right infra-axillary region there is harsh inspiratory sound, with moist râles. No dullness on percussion anywhere, except below the left clavicle, where it is not very pronounced.

The friction sounds persisted until the 27th, by which time, however, they were very much less distinct; and then were heard dry râles over right lung anteriorly and posteriorly, and moist râles in left lung posteriorly. He did not complain of pain anywhere, but of the cough and weakness. Not much change in general condition. The whisky and cod-liver oil and opium were continued.

Nov. 6.—Temperature ranges between 99° and 100° in the morning, and 99° and 102° in the evening; occasionally it is higher in the morning than in the evening. Fine râles are heard on right side anteriorly, and larger râles posteriorly. Emaciation is very marked.

Nov. 7.—States that he feels better; no pain; pulse 104, temperature 101.4° . At half past two P. M. he was seized suddenly with the most profuse hemoptysis, from which he died in a few minutes.

A post mortem examination was made by Dr. N. P. Dandridge, pathologist of the hospital. The lungs were adherent to the chest walls by recent lymph. They contained throughout numerous miliary tubercles: the largest of these had undergone slight softening in the center. No cavities were found anywhere. The bronchial tubes of both lungs contained blood; but although a most careful search was made for the source of the hemorrhage, it could not be discovered. The peritoneal membrane was everywhere studded with miliary tubercles and covered with old lymph: the cavity contained a small quantity of serum. Numerous miliary tubercles existed in the liver, and the spleen was enlarged, having interspersed through its substance a great number of caseous masses of variable size. The mesenteric glands were enlarged and caseous.

A point of interest in this case is the course of the abdominal symptoms. When he came into the house he presented all the characteristics of tubercular peritonitis, and such was the diagnosis. But in the course of a few weeks, and upon a very simple treatment, these symptoms entirely subsided, and the patient gained strength and flesh, notwithstanding, as was proved post mortem, the presence of most extensive abdominal lesions. Judging from symptoms alone these seemed to have but little to do with the fatal issue.

The other feature of interest was the occurrence of such profuse and fatal hemorrhage, without the discovery, even after the most careful search, of any condition to account for it.

Hattie S., aged forty-eight; admitted to Cincinnati Hospital October 26, 1878. Her previous health had been good, except that for the last five years she had suffered with occasional attacks characterized by choking sensations and distress in the region of the heart.

Condition on Admission.—A woman of fair muscular development, and apparently well nourished. Complains of distress in epigastric region, with some fullness there, and other dyspeptic symptoms, such as eructations, loss of appetite, etc. No fever; pulse normal; respiration apparently normal, but she complains of having some difficulty of breathing occasionally; tongue furred; bowels inclined to be constipated; mind quite normal. A physical examination of the heart and lungs yielded negative results. She was ordered bismuth and bicarbonate of sodium.

On this treatment she did not improve at all, and continued to complain of the sensation of oppression in the chest, and dyspeptic symptoms. Two or three days after her admission she became slightly jaundiced. She was able to be up all day, but complained of weakness.

Impressed with the fact that the woman was not improving, and that seemingly her distress increased, and thinking that possibly I had overlooked something, I made, on the morning of the 31st of October, a most careful exploration of her chest. On percussion, I found on the left side anteriorly some abnormal resonance: no dullness anywhere. On auscultation, there was revealed prolonged expiration over the whole chest, anteriorly and posteriorly, and moist râles in left mammary region; no abnormal cardiac sounds. There was no increased frequency of respiration, but she complained of a sense of oppression beneath the sternum. That evening she went to bed seemingly in about the same condition as she had been in for the last day or two. At nine o'clock she rose in bed, fell over on the floor, and in a few minutes was dead, never having spoken.

Dr. Dandridge made a post mortem examination, and found

in the pleural cavities a large quantity of serous fluid containing no lymph; the pleural membrane was quite smooth and apparently healthy. The lungs were very edematous, but otherwise normal; the heart was normal; the kidneys were possibly a little firmer than normal, but this was rather uncertain, and otherwise they presented nothing abnormal. Other organs healthy.

In considering the case, two questions will present themselves for solution. How long had the hydrothorax and edema of the lungs existed, and what was the cause of them?

In regard to the first, I can not help thinking that they must have occurred a very short time before death. I examined the patient about ten hours previously, and as the case had puzzled me a good deal, I was exceedingly careful in my investigation, so that had such a condition as was found on post mortem existed at that time, it would not have escaped me; besides, the nurse noticed nothing unusual at the time of the retirement of the patient.

As to the second question, it is very difficult to answer; indeed, I think impossible. It may be said that the kidneys were at fault. Dr. Dandridge, in his report of the post mortem examination, stated that possibly they might be a little firmer than usual, but this was even uncertain; and the urine did not exhibit a trace of albumen during the life of the patient, nor did she exhibit any other symptom of kidney disease. Hence, I would regard this case as one of acute hydrothorax and edema of the lung, the pathology of which is entirely unknown.

CINCINNATI, OHIO.

LECTURES ON THE SURGERY OF THE FACE.*

BY FRANCIS MASON, F. R. C. S.

Surgeon and Lecturer on Anatomy at St. Thomas's Hospital; Hon. Fellow of King's College, London.

LECTURE I.—PART I.

Mr. President and Gentlemen: My first and most obvious duty is to express to the Council my sincere thanks for the honor they have conferred upon me by electing me as the Lettsomian lecturer for the current session. I must confess that whilst I am deeply sensible of the compliment that has been paid me, I am at the same time profoundly conscious of the responsibility that so distinguished a position involves.

In contemplating how I might best occupy the time allotted to the three lectures that I shall have the honor of delivering, I remembered that for many years I had taken considerable interest in the surgery of the face, mouth, throat, and contiguous parts, and, as I had collected several thousand references bearing on these regions—representing, as may be supposed, an immense amount of valuable information—I came to the conclusion that if I sifted some of these references, I might be enabled to submit to the Fellows of the Society many points of more than ordinary or passing interest. I venture, therefore, to engage your attention by describing, as far as my limited time will allow, the surgery of the face, and in bringing this subject before you, I must beg your kind indulgence, inasmuch as I shall necessarily have to refer to many topics with which I feel sure you are all more or less familiar; and I wish to say, at starting, that my object is not to excite sensation, or to provoke controversy by placing before you novelties, but is rather to group together a number of cases I have culled from various sources, including many that have been under my own observation, and which have special reference to the surgery of a region which from its

* Delivered at the Medical Society of London, January, 1878.

conspicuousness forms a very important part of the human body.

My first lecture will be devoted to the diseases, the second to injuries, and the third to the deformities of the face.

In order to render my subject as complete as possible, it will be necessary for me to make a few observations on skin diseases, and these need not detain us long.

Erythema, Roseola, and Urticaria.—These diseases are not unfrequently met with on the face, and resemble each other in many particulars.

In *Erythema* the face is covered more or less with blotches of either a bright red or bluish hue. The eruption depends upon various causes, into which I need not now enter, but I may make a passing reference to the peculiar erythematous blush that is occasionally noticed on the body after surgical operations even of the most trivial kind. The face often participates in the general eruption, which has almost a scarlatinal character. It is amenable to simple treatment, and is chiefly important from a diagnostic point of view. *Erythema circinatum* is particularly seen on the chin and lips, and appears as distinct circles, or segments of circles. *Erythema nodosum* is sometimes observed on the forehead, and very much resembles the same disease noticed on the front of the legs in delicate women. It has been mistaken for nodes, but with a little care a correct diagnosis may be arrived at.

In *Roseola* there is less swelling of the skin. The eruption is first of a bright red, which gradually subsides into a deep rosy hue. In this disorder there is more or less redness about the palate and fauces.

Urticaria or *Nettle-rash* is sometimes limited to the face, and seems to be an aggravated form of erythema or roseola, its characteristic point being the presence of a number of elevations of wheals of variable shape, which are produced by spasm of the muscular fibers of the skin, with a slight effusion of serum. Mr. Erasmus Wilson has pointed out that in the wheals of urticaria an alternate contraction and relaxation of

the muscular fibers may be observed, which gives an appearance of pulsation, as of an ebb and flow of blood in the capillary vessels.

All these eruptions may, in most instances, be traced to some error in diet, and are prevalent at particular seasons of the year, especially if there be sudden alternations of temperature. I need not add that certain medicines produce similar eruptions. As a rule these diseases require but little treatment beyond attention to diet, with the administration of saline purgatives, alteratives, and suitable tonics.

Lichen.—Lichen is often found on the face of infants and children, and seems to be due to the irritation caused by teething. The eruption is easily recognized, and if the finger be passed lightly over the skin of the part affected, the cutaneous surface feels like a delicate nutmeg grater. There is generally more or less erythema present. In simple cases the eruption undergoes desquamation, and thus a cure is effected, whereas in the more severe forms, as in lichen agrius, there is considerable inflammatory action, inducing a copious serous discharge, almost amounting to eczema, and accompanied by much constitutional disturbance.

Herpes.—Herpes is commonly met with on the face, attacking chiefly the lips, eyebrows, and ears. The vesicles, which are dome-shaped, appear in groups of patches, more or less circular in form. Moreover, they are frequently found to coincide exactly with the cutaneous distribution of certain nerves. Thus, in one case reported, the eruption was limited to the distribution of the left supra-orbital nerve, and throughout showed its distinctive nerve character. Five days before the eruption appeared there was constant neuralgia in the exact course of this nerve. The vesicles ran upwards over the forehead, and as far as the top of the head, in a longitudinal direction. The eruption was markedly limited to the left side of the forehead and head, the side of the nose, and to the left upper eyelid. Sir James Paget has placed on record an interesting example in which the parts supplied by the second division of the right fifth cerebral nerve were impli-

cated. In this instance, as in the previous one, extreme pain preceded the eruption. This case was, moreover, considered unique in having necrosis of the jaw as a consequence of the intense inflammation of the palate and gums. Twenty-six days from the commencement of the disease one of the bicuspid teeth of the right side of the upper jaw fell out, on the next another, and in a few days later the canine and both incisors. The herpetic eruption was also noticed on the roof of the mouth.

Eczema.—The eyebrows and ears are no uncommon situations for eczema. In this eruption there is a constant serous exudation, hence its title "humid tetter." The vesicles have a pointed or acuminate form, and if the disease is unchecked, it assumes a somewhat purulent character, bordering on impetigo, and known as eczema impetiginodes, a disease frequently noticed on the alæ of the nose and on the lips of ill-fed children.

The eruptions of *impetigo* and *ecthyma* often coëxist, and I need hardly add that their main difference is that in impetigo the eruption is generally confluent, whereas in ecthyma the pustules are solitary, and have an inflamed base.

The constitutional treatment of these diseases must be conducted on general principles, but local applications are particularly suitable when there is much serous exudation. Ointments of a simple character, such as zinc ointment or compound subacetate of lead ointment, are especially serviceable, as they prevent evaporation, and thus obviate the production of scabs.

Psoriasis and Lepra.—These affections are occasionally met with on the face. They are characterized by their dryness, and in this respect differ essentially from eczema. Psoriasis that follows the infecting or true syphilitic sore does not, I venture to believe, commonly affect the face, and when this part is attacked, the inference is, as I think, that the patient has been rather severely poisoned by the disease. The severity of the attack is further indicated by the eruption appearing simultaneously on the palms of the hands and the

soles of the feet. From some cause the face and the dorsum of the hands—parts exposed to atmospheric influences and exposed also to observation—seem, fortunately for the sufferer, to possess comparative immunity. The administration of arsenic, iron, iodide of potassium, and the perchloride or other preparations of mercury, generally effect a cure. Locally the white precipitate ointment may be advantageously employed.

Parasitic Diseases.—Of the parasitic diseases we have the type of the animal parasite in *scabies*, which is said by some authorities never to attack the face, but I am sure that it is occasionally found in this region. When it occurs on this part, Dr. Tilbury Fox has noticed that it is occasionally accompanied by sympathetic eczema about the scalp, and in children by ecthymatous pustules.



FIG. 1.

The *tineæ* or vegetable parasites are not unfrequently seen on the face. Thus *tinea circinata* is occasionally observed on the chin and on the cheek, as shown in the woodcut (Figure 1). *Tinea decalvans* manifests itself as bald patches on the skin in the region of the whiskers or beard, and *tinea sycosis* especially attacks the chin. I may say briefly respecting the treatment, that ointments containing sulphur are invaluable in scabies, and slight mercurial preparations are useful in the different forms of *tineæ*.

Acne.—The only other eruption to which I need now refer is acne, which is perhaps the most common of all diseases of the skin of the face. *Acne punctata* appears as small black spots, which are the orifices of the sebaceous follicles blocked up with sebaceous matter, dirt, and soap. Its most usual situations are those that escape the friction of the towel after washing. Thus the disease is particularly noticed on the cheeks, beneath the prominence of the malar bone, between the chin and lower lip, on the side of the nose, in the tem-

poral region, and especially in the concha of the ear. In acne simplex there is peri-follicular inflammation, and very often the black spots of acne punctata may be observed at the summit of the small pustules. In acne indurata the inflammatory action is of subacute character. Here the black spot is seldom observable, but instead there is a hard, somewhat diffused lump, which is readily appreciable to the touch. These varieties of acne are essentially diseases of early adult life, and are met with, as a rule, from puberty to about the age of thirty. They are often rebellious to treatment, but may be kept in abeyance by the patient attending strictly to diet and by irritating the parts as little as possible. It is best not to wash the face more frequently than is absolutely necessary, and warm water alone, without soap, should be used. The part should be dried with a soft towel. Acne rosacea seldom appears before the age of forty, and thus differs from the other varieties already described. The face is especially its local habitation. It is observed partly on the nose, and extends laterally to the cheeks as a reddish patch, on which a few pustules are here and there scattered. Although it is often attributed by the ignorant to high living, it is very frequently an indication of imperfect digestion, and occurs, as is very well known, in persons of the most abstemious habits.

Boils and Carbuncles.—Boils and carbuncles occasionally attack the lips, cheeks, and forehead. They cause great disfigurement, and are attended with more or less, but sometimes a considerable amount of, pain. The more circumscribed swelling in a boil gives it its distinctive character, and it comes, from time to time, in this, as in other parts of the body, in crops, whereas carbuncle is usually solitary, and there is a diffuse, brawny, and peculiar hardness due to the arrangement of the soft structures comprising the lips, cheeks, and neighboring parts. With regard to local treatment the question of making incisions seems still to be *sub judice*. I venture to think that in most instances boils and carbuncles are better left to nature, the surgeon merely assisting by ad-

vising the free application of warm-water dressings. By this mode of treatment the surrounding parts become thoroughly relaxed, and thus the inflammatory products are more readily carried off. It is not often that facial carbuncle is followed by a fatal termination, yet Dr. Cockle brought before the notice of this society in 1874 an example of death from this disease, which was situated on the left side of the upper lip.* Mr. Cæsar Hawkins also reports a fatal case of a carbuncle which attacked the chin, and was as large as a tennis ball.† Both these patients died of pyæmia. Again, Mr. Thomas Smith has directed attention to two deaths from facial carbuncle. He attributed the fatality of this form of carbuncle to the susceptibility of the face to erysipelas and edema, and also to the peculiarities of the venous circulation shown by the sudden deaths that have been occasionally noticed after injecting nævi of the face with strong styptics, such as the tincture of the perchloride of iron.‡

Abscesses.—Abscesses of idiopathic origin are not very common, but they are occasionally seen on the face, and the usual variety is that which is known as strumous abscess. It



FIG. 2.

is of slow growth, and exists as a collection of sero-purulent fluid, immediately under a reddened, thin, and generally oblong portion of skin, the cheek being a common situation. A good plan of treating these abscesses is to make a small opening in a dependent position, which allows the contents to exude spontaneously. If, in addition, a pad of lint of suitable size be applied over the abscess, a reaccumulation of the matter is obviated.

* Proceedings of Medical Society, Vol. I, p. 163.

† The Lancet, November 17, 1860, p. 487.

‡ Clinical Society of London, January 14, 1870.

These abscesses are comparatively painless, their progress is slow, yet, even with the greatest care and attention, they are frequently followed by ugly cicatrices, which are well shown in Fig. 2.

Fistulous openings on various parts of the face are not unfrequently met with as the result of decayed teeth, or of necrosis of the subjacent bones, the lower jaw, for example, as shown in the woodcut (Fig. 3). Or they may depend upon the presence of other foreign bodies, as in a case that was under the care of Mr. Henry Smith, which was sent to him in the belief that there was necrosis of the jaw. After a careful examination, Mr. Smith discovered and removed a piece of tobacco-pipe, about three inches long, which had been imbedded in the cheek for several years.*



FIG. 3.

Sometimes the disease may be traced to the antrum, as in a case that Dr. Richardson kindly placed under my care about three years ago. In operating on the patient I thought it advisable to divide the upper lip in the median line, and having separated the soft parts from the bone I freely opened the antral cavity. A large quantity of offensive cheesy material was evacuated, and the patient made an excellent recovery.

Abscesses connected simply with the soft parts may be complicated with erysipelas, but they are rarely dangerous to life. Dr. Bacon, of the Fulbourn Lunatic Asylum, has, however, placed on record an interesting example to prove that even death may occasionally occur in such cases. His patient was a lunatic who had an abscess of the cheek caused by a decayed tooth. In three or four days from the com-

* Assoc. Med. Journal, November 10, 1854, p. 1017.

mencement of the attack the patient died comatose from the extension of the inflammation into the brain.

Ulcers.—Ulcers of infinite variety are met with in the face, and are frequently the result of injuries by which the soft parts have been more or less damaged; or they may arise idiopathically, as in rodent ulcer and epithelioma, of which I shall speak presently.

The cachectic ulcer is frequently found on the face. It begins as one or more hard lumps of variable size in the subcutaneous tissue, in which at first there is but little pain. To these indurations the name of “gummata” has been applied, and they are said to be usually due to syphilitic taint. There are, however, many examples of this ulcer, in which the history of syphilis is entirely wanting. Thus, I here show you several photographs of patients having such ulcers, and in none of these instances was there, as far as I could make out, the slightest trace of syphilis.

Whilst on the subject of ulcers, I must not omit to refer to the possible presence of the true infecting syphilitic sore which has been met with on various parts of the face. These sores are important chiefly from a diagnostic point of view, for they have not unfrequently been mistaken for cancer, and have been treated accordingly. In illustration of this point, I may say that in 1872 I saw a man at the hospital, who was twenty-six years of age, and had been operated upon three times within two months for, as he said, cancer of the lower lip. When I saw him he had about his body the clearest evidence of constitutional mischief. What remained of the lower lip presented an uneven, jagged, white patchy appearance, which seemed to me, as well as to those who examined him, to be markedly characteristic of syphilitic infection. He was placed on the solution of perchloride of mercury, and he recovered. His object in applying at the hospital was to undergo a further operation.

Cysts.—Cysts, or cystic tumors, of various kinds are frequently found on the face. Perhaps the commonest variety is

the sebaceous tumor, well represented in Fig. 4. Such cysts are of slow growth, and often present at their summit a black spot, as was the case in the patient just referred to. They are,



FIG. 4.

as a rule, dome-shaped, and their outline differs in this respect from fatty tumors, which generally present a more flattened form, and are seldom met with in this region. This diagram (Fig. 5) is introduced to show the comparative appearance, on section, between a sebaceous cyst and a fatty tumor.

Cystic tumors are usually subcutaneous. Occasionally, however, as in the frontal region, they are submuscular, or subaponeurotic. Sometimes they are met with in connection with the mouth, or even with the cavity of

the nose, as in a remarkable instance reported by Mr. Mungo Park,* in which the tumor, being so situated, displaced the nasal bones considerably. Their contents vary in character; thus they may either be of cheesy consistence, being principally composed of cholesterine, fat, and epithelial scales, or they may be of a more fluid nature.

Hydatid cysts are occasionally met with on the lips and eyelids, and the dermoid cysts are generally situated in the region of the eyebrow, and often contain hair.

The best mode, in my opinion, of removing cystic tumors is to transfix them, by which a free opening is at the same time made into the cyst cavity. After the contents of the sac have been squeezed



FIG. 5.

* The Lancet, 1841-42, Vol. I., p. 886.

out, the cyst itself becomes more evident, and is easily dissected from the surrounding parts, without much hemorrhage, provided care be taken to keep the knife close to the sac.

The removal of cysts situated in the region of the brow is often attended with troublesome hemorrhage which hampers the operator. It is well, under such circumstances, to suspend the operation for a few minutes until the bleeding has ceased. Fine silk stitches may be employed to bring the edges of the skin-wound together, or really good adhesive plaster is frequently all that is required. In children it is of special importance to bring the edges accurately together, in order to obviate a subsequent scar.



FIG. 6.

Blood-tumors, or hematomata, are occasionally seen on the ears (Fig. 6), and are said to be frequently met with in insane and idiotic persons. In referring to such cysts, Dr. Gudden observes that, inasmuch as he has noticed finger-marks, these tumors may often be traced to rough handling either by the patients or by others.

Reviews.

The Cell Doctrine—Its History and Present State. For the Use of Students in Medicine and Dentistry. Also a copious Bibliography of the subject. By JAMES TYSON, M. D., Professor of General Pathology and Morbid Anatomy in the University of Pennsylvania, etc. Second edition, revised, corrected and enlarged. Illustrated. Philadelphia: Lindsay and Blakiston. 1878. 199 pp.

Prof. Tyson's little book is a summing up of our knowledge of cells. His first edition was given to the world eight years ago, and was an admirable work, giving the theories of the development of the tissues from the earliest times, but coming to the special ideas of individuals with Haller's fiber doctrines in 1757, and continued by epitomizing the views of other writers of mark until the time of publication. Since 1870, much has been done in adding to our knowledge of the nature and function of cells, and this by a number of individuals, and perhaps equal numbers have done as much that did not advance our knowledge; and it is a substantial service to students of all ages to have a competent man winnow the chaff from the grain in such cases, leaving the student more time to thoroughly digest and assimilate the grain. Prof. Tyson, in his second edition, has done this service in an unexceptionable manner, presenting, in brief but intelligible terms, the conclusions of all investigators whose conclusions are worth rehearsing, up to the present, including the labors of Dr. Klein, published in July, 1878.

The last twenty-five pages of Prof. Tyson's text are devoted to an exposition of the cell knowledge of to-day under the title, "Summary—present state of the cell doctrine—author's views." This summary is so concise and meaty that one must be familiar with the late teachings in cell literature, or otherwise have examined the preceding pages of the book with

some attention, to enable him to appreciate all that the summary is intended to convey.

Prof. Tyson has been charged with leaning, more than science will warrant, to the doctrines promulgated by Beale. This is probably a mistake. He quite properly coincides with Beale in the view that pabulum passes through the formed material, and whatever constitutes the periphery of a cell, to its center or nucleus, where the first pabulum undergoes transformation into germinal matter by virtue of the vital energy of the existing germinal matter. But no one probably is prepared to deny this, whatever opinion he may have concerning Beale's idea that this service of metabolism is *sui generis*—a special vital endowment, and not a phase of correlated force. Tyson does not indicate his adherence to, or rejection of, these views of Beale, and we are, therefore, at liberty to suppose that he joins the great body of biologists in the belief that Beale is in error; *albeit*, no one, now remembered, has yet shown how this metabolic action of the cell is accomplished by a phase of physical force, while the procedure is in the face of the ordinary laws governing physical force. Perhaps Tyson's frequent quoting and copying Beale conveys to some the impression that he adopts all Beale's theories, but such a conclusion does not follow. Beale observes so accurately, reports so honestly, that all truthful and unbiased writers must account him high authority, but need not therefore follow him in his theories. And while Tyson begins his book with a plate of seventeen colored figures illustrating Beale's views of germinal matter and formed material, he closes the book with a double plate of twenty shaded figures, copied from Klein, displaying the very latest observation of intranuclear network, and fibrillar structure of cells.

Brief as are Prof. Tyson's notices of the steps by which we have arrived at our present status in cell wisdom, they are explicit and ample enough for the end he aims at; and for those who wish to pursue the investigation further, he has made copious foot-note reference to authorities, and furnishes twenty-five pages of bibliography at the close of the text.

Profitable advance in medical science is to be looked for chiefly in a more exact knowledge of histology and physiology, and the prime factor in these is the structure and function of cells in their untold varieties and relations; and the second factor is—if we do not count it embraced in the first—the special anatomy and service of the nervous system in its entirety. Although these are still in a state of progressive development, students of medicine should have them pressed on their attention as foundation elements of their professional education, with the same earnestness and until they compassed them as clearly as the students of the science of numbers have pressed on them, and compass the primary departments of arithmetic. The busy practitioner can not find time to pursue these branches as they progress, in detail, and for him the faithful work of Tyson is a real boon; and let us live in the hope that, in the near future, some equally competent laborer will enter the fruitful field of nerve literature, and, separating the tares from the wheat, do for us in this what Tyson has done for us in that. The field is large, the ground is strong, the tares abundant, but the work is urgent, and for its successful accomplishment the reward will be great—in the gratitude of good doctors. Instructors and students in medical colleges will rise up and bestow their blessing. Who will enter the lists for this fame and these plaudits? J. F. H.

Clinical Diagnosis—A Hand-Book for Students and Practitioners of Medicine. Edited by JAMES FINLAYSON, M. D., Physician and Lecturer on Clinical Medicine in the Glasgow Western Infirmary, and Examiner in Clinical Medicine to the Faculty of Physicians and Surgeons, Glasgow. Philadelphia: Henry C. Lea. 1878.

The book begins with a list of contributors and their subjects, which gives the reader information, at one glance, not only of the contents but who are the authors. W. T. Gairdner, on the Physiognomy of Disease; James Finlayson, (editor), on

Case Taking, Family History, and on Symptoms of Disorder in Various Systems; William Stephenson, on Disorders of the Female Organs; Alexander Robertson, on Insanity; Samson Gemmel, on the Sphygmograph, and on the Physical Examination of the Chest and Abdomen; Joseph Coates, on the Examination of the Fauces, Larynx and Nares, and on the Method of Performing Post Mortem Examinations.

Book-making, excessive book-making, appears to be the ruling passion of our times. Even a brief and cursory examination of the subject will show that excellent works on almost every important medical topic have already been published. The majority of books belonging to this class are exhaustive, and represent the most recent as well as the best knowledge on the subjects they treat of. In making up a working library, the physician is not troubled with wants that can not be filled; on the contrary, he is embarrassed with wealth of material before him, and he hesitates in his choice between works of great and acknowledged merit, authors of distinguished and well deserved renown. Let no man, then, inflict a new book upon a long-suffering public, unless he has something new and original to say, and that something is worth the saying, unless he can say something that has already been said in a new and a better way than it was ever said before.

The perusal of the volume whose title appears at the head of this review, yields the information that it contains nothing new or original—nothing which has not been often and as well, if not better, said before in the numerous text-books and monographs with which the medical press is teeming.

The book contains eighty-five illustrations, hardly one of which is original, but all are painfully familiar, and have appeared in numerous books already published. Every physician, who keeps up with the literature of his profession, has the subject-matter of this volume in various forms in works already in his possession, and does not need this book; to one who is not a reading man, it is useless.

The paper, typography and binding are everything that could be desired.

J. A. O.

The Principles and Practice of Surgery. By JOHN ASHHURST, Jr., M. D., Professor of Clinical Surgery in the University of Pennsylvania, etc. Second edition, enlarged and thoroughly revised. With five hundred and forty-two illustrations. Philadelphia: Henry C. Lea. 1878.

The first edition of Dr. Ashhurst's work was noticed in these pages on its appearance, now seven years ago. The second edition, thoroughly revised and (but little) enlarged, is before us. We say with a pleasure which none but a student of surgery can fully appreciate "*but little*" enlarged—only thirty pages having been added to the present volume. And yet it may be safely affirmed that the author has omitted nothing of importance which has transpired in surgical science in the intervening term. The general arrangement of the work has not been changed, and is, therefore, as nearly perfect as its scope will allow. The only department in which the first edition could, perhaps, have been much bettered was in its illustrations. These have been greatly improved by the introduction of a number of original cuts, and by replacing a lot of pictorial antiquities with modern drawings.

We have previously spoken of Dr. Ashhurst's work in terms of praise. We wish to reiterate those terms here, and to add that no more satisfactory representation of modern surgery has yet fallen from the press. In point of judicial fairness, of power of condensation, of accuracy and conciseness of expression and thoroughly good English, Prof. Ashhurst has no superior among the surgical writers in America.

Notes on the Treatment of Skin Diseases. By ROBERT LIVEING, A. M., M. D., etc. Fourth edition, revised and enlarged. New York: William Wood and Co.

This little book is more than worth its weight in silver, or in gold, to the busy practitioner. It is clear, concise, condensed, in its statements, and comes in such a cheap form any physician can purchase it.

On Rest and Pain—Lectures on the Influence of Mechanical and Physiological Rest in the Treatment of Accidents and Surgical Diseases, and the Diagnostic Value of Pain. Wood's Library of Standard Medical Authors. New York: William Wood and Co. 1878.

It would hardly be necessary to give the full title of this book for the benefit of the older members of the profession, who have pleasant recollections of the first edition published years ago. They would recall "Rest and Pain" as one of the most philosophical and suggestive books of its period, and the younger members will doubtless ratify their opinions and the good judgment of the publishers in beginning their library with this work, when they have read and *studied* this edition of Mr. Hilton's work.

Though the book is principally taken up with the surgical aspects of "Rest and Pain," yet there is an amount of precise anatomical detail and physiological instruction, which is largely available for the physician as well as the surgeon.

The author starts out, in the first lecture, with some general considerations of "Rest" in relation to growth and then in relation to repair, "endeavoring to inculcate that growth and repair bear an exact relation to due physiological rest, local and general." Illustrations are drawn from the worked brain and nervous system of the professional man. These sentences have special application to the busy life of modern times. Then follow statements respecting the structure of the heart, lungs, liver and brain, which allow the necessary variations between the ordinary and the unusual functional activity of these organs, and which secure at the same time the needed return to the quiet condition. The application of the general principles, which he developes, is carried out in considerable detail in Surgical Therapeutics. Equally interesting are the portions of the book which treat of Pain.

Students and practitioners need such anatomical and pathological instruction as they find here to teach them and to assist in the clinical investigation of pain. It is by no means an easy diagnosis, that of pain in its varied anatomical positions and pathological significance. Such an exposition as we have here will be a welcome and refreshing study.

The chance which the publishers afford for getting a cheap edition of valuable works, is an excellent one. We would prefer to have a better set of engravings. W. C.

The Pathological Anatomy of the Ear. By HERMANN SCHWARTZE, M. D., Professor in the University of Halle. etc. Translated by J. ORNE GREEN, A. M., M. D., Aural Surgeon Boston City Hospital, etc. Boston: Houghton, Osgood and Co.

This book is entirely devoted to the pathological anatomy of the ear, and the first that has been strictly confined to this subject: it may be accepted as an authority, as it presents in small space the results of researches and experiments which required much time and a great deal of labor and patient study. Dr. Schwartz is already known to the profession as a thorough and impartial worker in his field of scientific investigation. His opportunities have been abundant, and in this work he has contributed a valuable addition to the literature of otology. The translation has been well made, and the work may be considered necessary to all physicians whose practice includes diseases of the ear. J. R. W.

The Physician's Pocket Day-Book. By C. HENRI LEONARD, M. A., M. D. Published by the Author. Detroit, 1878. For sale by Cathcart & Cleland, and J. P. Morton & Co. Price, \$1.00.

Dr. Leonard's little books are usually practical, and the above book is not an exception; and for recording the physician's day's work we know of none, occupying so small a space as this one, that will serve the purpose equally well. This is strictly a day-book, and does not contain a condensed materia medica, poisons and their antidotes, etc., which additions might be referred to a few times in a year, but scarcely counterbalance the increased bulk of the book.

A Monograph on the Treatment of Diphtheria—Based on a New Etiology and Pathology. By WILLIAM C. REITER, A. M., M. D. Philadelphia: J. B. Lippincott and Co. 1878.

This is a small *brochure*, but a strong one. Its substance may be stated thus: The cause of diphtheria is excess of fibrin in the blood; to cure it, give a child, eight months old, three and a half grains of calomel every hour for sixty hours; bleed a girl seventeen years old twenty-four ounces, and give her twenty-five grains of calomel to begin, then ten grains every hour until she has taken half an ounce. This is about all there is of the pamphlet, and it seems hardly worth while to have published this, and to have it copyrighted was surely supererogant.

The author lives in Pittsburgh, and after reading his cases one can heartily join Prof. Wood in his opinion—expressed on another occasion—that diphtheritic patients in Pittsburgh are pretty hard to kill.

J. F. H.

A Treatise on the Science and Practice of Midwifery. By W. S. PLAYFAIR, M. D., F. R. C. P., etc. With Notes and Additions. By ROBERT P. HARRIS, M. D. Second American, from the second and revised London edition. Philadelphia: Henry C. Lea. 1878.

This edition of Playfair's *Midwifery* is dedicated to Dr. T. G. Thomas. It is a great improvement upon the first edition, thanks especially to a severe criticism of the latter which was published in the *Dublin Journal of Medical Science*, and nearly every error pointed out by the Dublin critic has been corrected in the second edition; and thanks, too, to the work of the American editor who stands so high as an obstetric authority. We can heartily commend it alike to student and practitioner.

Clinic of the Month.

CLINICAL REMARKS ON CRETINISM.—The following observations by Dr. Abraham Jacobi, are taken from the Hospital Gazette:

Frank H., eight years of age. As an infant he seemed to be healthy up to eight months, when he had a slight convulsion, as the result of an injury received. The mother noticed that he seemed weak for about three weeks after this; but he then gradually recovered his strength. When four years old, he had an attack of measles, and when five years, of varicella. He began to walk when he was nineteen months old; but although he could say single words at a comparatively early age, he was not able to combine them, in even the shortest sentences, until he was four years old.

The mother thinks he is not as bright as other children of his age. He learns anything with great difficulty, but it would seem that his powers of memory are unimpaired, or at least to any great extent. He is very irritable and quick-tempered, and sometimes becomes very violent when enraged. His appetite is good, and he usually sleeps very well. Occasionally (but only at long intervals) he is troubled with nocturnal enuresis; and he has some naso-pharyngeal catarrh. The pupils are normal, and there is no muscular paresis, and no valvular murmur of the heart.

In regard to the learning to talk so late, I may say that in some instances, even where children are of unusual intelligence, this is the case; but, as a general rule, children of good intellectual capacity begin to talk comparatively early. Here, we have just seen, the mother does not think her boy as bright as other children of the same age, and, therefore, we naturally associate this with the other symptoms denoting an impaired

mental development. In a case like this a good deal depends on whether we can trace the trouble back to fetal life or not. Here it would seem that there is no ground for attributing it to that period. The mother has had no other children, and she says that she noticed that this one smiled about the usual age—say at five months. He seems to have had some sort of spasmodic attack when eight months old; but the effects of it soon passed off, and he walked at the age of nineteen months.

On looking at the child we are first struck with the narrowness of the head and face; and the mother states that in this respect the boy resembles his father. When, on examining the head more carefully, we find indications that the anterior fontanelle probably closed at an unusually early age. The supra-orbital ridges are quite prominent, but the upper part of the forehead is narrow and retreating. We also find the hard palate very flat, and where this is the case, we expect to see also an unusually short vomer. This makes the insertion of the nose very low, and is one of the characteristic features of cretinism. The teeth and alveolar processes, as well as the bones in general, are extremely hard, and present a clumsy appearance. In cretinism there is very early ossification between the sphenoid and occipital bones; what Virchow terms the tribasilar synostosis occurring at the base of the skull. Such cases are characterized then by low vomer, retracted nose and clumsiness of the bones in general. As we would naturally expect, the base of the brain is abnormally short. Of course there are various degrees of severity in cretinism; but when the condition is well marked, the case is usually a hopeless one.

As to the origin of the trouble in the patient now before us, we are not able to trace it back to any fetal or infantile encephalitis. The convulsions spoken of seem to have been merely the result of an accident, and to have been followed by no further trouble; so that we are forced to fall back on something else. The explanation, I think, is found in the present condition of the brain, as indicated particularly by the

very marked flatness of the palate. The prognosis here is poor. Medical science can do nothing for this boy; and for all that can be accomplished in his case, we must look to careful and patient training on the part of his parents or teachers.

TREATMENT IN CASES OF EXCESSIVE LOCHIAL DISCHARGE. Dr. Hugh Miller, in a clinical lecture delivered at Glasgow, recommends the following prescription in cases in which there is an excessive discharge, accompanied by a relaxed condition of the uterus. He administers one drachm doses of liquid extract of ergot repeated every three or four hours, and

R Quiniae sulph.,	3 ss
Acidi hydrobrom,	3 vj
Aquam ad.,	3 ij

Dose, one drachm in aq. ter. in die.

By this method large doses of quinia may be given without causing headache. In septic cases Dr. Miller advises the employment of sulpho-carbolate of potash, in the form of powders, in doses of ten to fifteen grains internally three times a day. When the discharge is suspended, the treatment consists of turpentine stupes applied over the lower part of the abdomen, with the addition of warm moist cloths, or of sponges, pressed out of hot water, and applied to the external parts. In special cases, which require an antiseptic plan of treatment, Dr. Miller makes use of a solution of thymol, one part to five hundred parts of water, or, better, three grains of thymol to an ounce of eau de Cologne. This mixture, which has a pleasant and rather refreshing odor, is simply sprinkled over the napkins before they are used. In severe cases, with a putrid odor, a solution of permanganate of potash, injected with Higginson's syringe, provided with a vaginal portion, is made use of; the injection of the fluid is continued till it returns unaltered in color. In all cases where the discharge is excessive, tincture of arnica is employed; the tincture is used in the proportion of one teaspoonful to a cupful of water; it acts as a mild astringent and disinfectant. (Practitioner, from the Edinburgh Medical Journal, Nov. 1878.)

TREATMENT OF ACUTE RHEUMATISM.—Dr. Alfred Stillé, Medical Record, in referring to blisters and alkalies, in the treatment of acute articular rheumatism, remarks as follows:

It may be difficult to see the connection between these two classes of remedies in their power to influence the course of acute articular rheumatism, and yet it is certain that they do so influence it, and in the same way, *i. e.*, by altering the condition of the blood from acid to alkaline. If you ask me to explain to you how blisters act in this way, I am obliged to confess my ignorance. To produce this effect, they must be applied over all the affected joints. Experience, if not science, has decided conclusively in their favor. They do produce a cessation of the local symptoms, render the urine alkaline, and diminish the fibrin in the blood.

This brings us to a consideration of the use of alkalies. Alkalies neutralize the acids, act as diuretics, and eliminate the *materies morbi*. Alone, and in small doses, they are unable to cure; but, when given in very large doses, their effects are marvelous; the pulse falls, the urine is increased in quantity and becomes alkaline, and the inflammation subsides. The symptoms of the disease are moderated, the duration of the attack is shortened, and the cardiac complications are prevented.

The dose of the alkalies must be increased until the acid secretions are neutralized. A very good combination of these remedies is the following:

R	Sodæ bicarb.	. . . . .	3 iss
	Potas. acetatis	. . . . .	3 ss
	Acid. cit.	. . . . .	f. 3 ss
	Aquæ	. . . . .	f. 5 ij.

S.—This dose should be repeated every three or four hours until the urine becomes alkaline. On the subsidence of the active symptoms, two grains of quinia may be added, with advantage, to each dose. The alkalies must be gradually discontinued, but the quinia continued.

The diet should consist of beef-tea or broth, with bread and milk; no solid food should be allowed. Woolen cloths,

moistened with alkaline solutions, may with advantage be applied to the affected joints. To these laudanum may be added for its anodyne effect.

The patient must be sedulously protected from vicissitudes of temperature, and lie in bed between blankets. The alkaline treatment relieves the pain, abates the fever, and saves the heart by lessening the amount of fibrin in the blood.

A long time ago Dr. Owen Rees, of London, introduced the use of lemon-juice. This remedy was thought to convert uric acid into urea, and so to help elimination. Though the treatment is practically right, the theory of it is wrong. Lemon-juice does good in mild cases, but can not be relied upon in severe attacks.

During the febrile stage of acute articular rheumatism the diet should consist mainly of farinaceous and mucilaginous preparations, with lemonade and carbonic acid water as a drink. The cloths applied to the joints should be changed when they become saturated with sweat, and in changing them the patient should be protected from the air.

The sweating may be controlled by small doses of atropia, from one-sixtieth to one-thirtieth of a grain. To prevent subsequent stiffness, the joints should be bathed with warm oil and chloroform, and wrapped in flannel cloths. In the proper season this condition is very well treated by sea-bathing. There is no specific plan of treatment in acute articular rheumatism. The treatment must vary according to the intensity of the inflammation, and the peculiarities of the patient.

THE TREATMENT OF PLACENTA PREVIA.—In a paper recently read before the Medical Society of the District of Columbia, Dr. J. T. Johnson calls attention to the high rate of mortality observed in cases of placenta previa, as regards both the mother and child. The frequent recurrence of hemorrhages so exhausts the mother that when the time for actual labor arrives she is in no condition whatever to bear the hemorrhage which usually accompanies the dilatation of the os. The child,

too, for the same reason, is very frequently sacrificed, even when the mother's life is saved. He strongly dissents from the treatment generally adopted in such cases, and advises that in all cases where the existence of a placenta previa has been clearly diagnosticated, premature labor should be induced before the occurrence of exhausting hemorrhages. In cases where labor has already begun, he favors the immediate introduction of a catheter, and the withdrawal of the liquor amnii. The uterus is thus at once provoked to greater activity, and, moreover, can act to a better advantage. The head, if that be the presenting part, is driven down, and as the cervix dilates, the pressure of the head controls the hemorrhage. The introduction of a sponge or laminaria tent, followed later by the use of Barnes's dilators, hastens the dilatation. In this way version may be avoided. Where version must be performed Dr. Johnson advises that bimanual version be tried, rather than that the hand should be forcibly carried within the uterine cavity through the imperfectly dilated os. In conclusion, he states that he is firmly convinced that in proper cases, and when seen in time, the induction of premature labor will save many lives. both fetal and maternal; and, also, that when the above-mentioned gentle means of dilating, and at the same time plugging the cervix, are universally adopted, the fearful mortality in these cases will be greatly reduced. (Boston Med. and Surg. Journal.)

FEBRIS INTERMITTENS TETANICA.—The manifestations of malaria are so various, that in a malarious district where one can not account for the symptoms in a case, quinia is given as an aid to diagnosis. Dr. Fronmüller, in the *Memorabilien*, Dec. 18, 1878, relates a case of tetanic intermittent fever in which quinia solved the problem. The patient came to the hospital on the 23d of April, 1878, barefooted through the cold. He complained of pain in the head and a stitch in the side. He had a chill, followed by fever and its accompanying symptoms. He was given an infusion of jaborandi which produced sweating and salivation. On the next night, he was

suddenly seized with cramping in the muscles of the neck and jaw. There was opisthotonos; the eyes were open and staring; the lower extremities in a convulsed condition. He was unable to articulate—was completely unconscious and without feeling.

This condition lasted four hours, but the patient was better the next morning and had some appetite. Temperature was $36\frac{1}{3}^{\circ}\text{C.}$, about 102°F. ; pulse 68, slight pain on pressure from the fifth to the eighth dorsal vertebra. From the 24th to the 27th of April he had seven well marked tetanic attacks, generally in the evening. The symptoms of epilepsy were absent. He was treated with ice-bags to the tender points over the spine, then morphia injections, and finally the application of leeches, and internally bromide of sodium.

The appetite was moderate, the spleen was enlarged, the blush from the fever became more apparent, and the tetanic attacks seemed to follow the cold stage. All the previous treatment had been of no avail, so Dr. F. concluded to treat the case as an intermittent, and accordingly gave him a half gram of quinia ($7\frac{1}{2}$ grains) three times a day. The day after beginning the quinia treatment the patient complained only of the quininism, and called for more food and beer. He had no more attacks, and at the end of a week was discharged from the hospital as cured.

OLEATE OF ZINC IN THE TREATMENT OF ECZEMA.—Dr. Radcliffe Crocker draws attention to the utility of oleate of zinc in eczema. For this purpose it is prepared by stirring together one part by weight of oxide of zinc with eight fluid ounces of oleic acid as free from palmitic acid as possible, and after letting it stand for two hours, heating it until the zinc is completely dissolved. On cooling it forms a yellowish-white hard mass, which can be made into the consistence of ointment by the addition of one part of vaseline or olive oil, or two parts of lard or solid ointment. Vaseline is preferable, as it is not liable to change. The other preparations soon become rancid; they should therefore be freshly made, and then answer equally

well and are much more economical. This preparation is very effectual in acute and chronic eczema in the discharging stage. In the dry stage it is also useful: but in many cases more stimulant remedies cure more speedily. The oleate of zinc ointment is a remedy of the same class as Hebra's unguentum diachyli; and whilst beneficial in all forms of eczema, its most striking effects, as just mentioned, are seen in the discharging stage, and so far as Dr. Crocker's experience has carried him, it never seems to do harm in any case, as happens when stimulating remedies are injudiciously applied. Dr. Crocker has treated a large number of cases with this remedy with most satisfactory results; he consequently recommends it as one of the most useful preparations for eczema that we possess. (Practitioner, from British Medical Journal, Oct. 26, 1878.)

· EXCLUSIVE MILK DIET IN CYSTITIS.—In May, 1871, I performed lithotrity on James H., aged sixty-eight, at St. Peter's Hospital, and completely got rid of a phosphatic stone in four crushings. The patient was a pale, thin pipe-maker, who had undergone much privation. He remained perfectly well for four years, when he began to have difficulty in micturating, and was very frequently disturbed at night. He then sought my advice. I sounded him, and found that his trouble arose from an enlarged prostate; there was not a particle of stone in the bladder, and the urine was only slightly clouded with mucus. I taught him how to pass a catheter, and he regularly emptied his bladder night and morning with the instrument, enjoying comparative comfort for years.

Last April he again came under my care, complaining that he was always in pain, and that his urine was very thick. His nights were broken, his strength greatly lessened, and he was not able to work. He was treated by various injections, medicines, and washing out the bladder, without relief.

Under these circumstances I determined to try Dr. George Johnson's method of an exclusively milk diet. Having put his alimentary canal in a fit and proper condition for commencing the treatment, the patient began on June 20th to

live on milk alone, taking half a pint every two hours, his urine being then a mass of muco-pus, which adhered tenaciously to the *pôt de chambre*. He could not pass any urine without the catheter, and was always worried by a dull aching pain above the pubes and in the rectum. The next evening he complained of an acid taste in his mouth, and brought up several pieces of curdled milk.

When there was a tendency of the milk to curdle, the patient was given bismuth. He progressed rapidly, and on July 5th was discharged cured of his cystitis, and a month afterward he remained quite well; but had, of course, to use his catheter as previously (W. F. Teevan, in *Lancet*, Dec. 7, 1878.)

PALUDAL TORTICOLLIS.—M. Jules Simon relates a case of torticollis due to miasmatic causes. The patient was a child of four years of age, a native of Bucharest, who had suffered from several attacks of intermittent fever. When brought under his notice it was suffering from spasmodic contractions of the sterno-mastoid, which commenced every day at about the same time, and lasted from four to five hours. The child was becoming pale, losing flesh and appetite. Fifty centigrammes of quinia were ordered to be taken every day. On the following day the attack was somewhat delayed, on the third the movements were very slight, and in six days they had entirely disappeared. (*Lancet*, Jan. 4.)

EPHEMERAL PARALYSIS OF BABIES.—M. Jules Simon, at his clinique at the Hôpital des Enfants Malades, draws attention to an affection, to which he gives the above name, pointing out that it is not to be confounded with infantile paralysis. It always has one of two causes: first, a powerful constriction, as in one case it was caused by a nurse seizing the child roughly by the arm; second, cold, as in one case in which it was caused by sitting on a wet lawn. It is accompanied by pains and hyperesthesia. The prognosis is very good, recovery being both complete and rapid. (*Ibid.*)

COPAIVIC ACID AND COPAIVATE OF SODA.—Roquette considers the ethereal oil and the balsamic constituents of copaiba inert, and regards its efficacy solely due to the copaivic acid, which forms salts with the alkalies existing in the human body, and is thus excreted through the urine. Dr. Zlamal agrees with him in this opinion after having successfully treated various important cases with copaivate of sodium, prepared at his suggestion by Geza Lucich. For obtaining the copaivic acid, copaiba is distilled with water to separate volatile oil, and the residuary resins are repeatedly treated with purified petroleum and strong alcohol. Copaivic acid forms white prismatic crystals, which, on exposure to the air, become opaque. Its sodium salt, $\text{NaC}_{20}\text{H}_{29}\text{O}_2$, is made by combining equivalent quantities of the acid and soda, and is likewise white and crystalline. Lucich recommends sugar-coated pills of copaivate of soda, containing each two grains of the latter, corresponding to six grains of balsam copaiva; analyses made by him of Brazil- and Para-balsam proved it to consist of ethereal oil 38.00 per cent., yellow crystallizable resin, copaivic acid, 52.75 per cent., brown soft resin 1.66 per cent. and water 7.59 per cent. (*Pharm. Centralb.*; *Amer. Jour. Pharmacy.*)

COLLODIUM IODOFORMIATUM.—It is made by dissolving one part of iodoform in fifteen parts of flexible collodion. It was successfully used by Moleschott for alleviating intense pain caused by gouty swellings, in orchitis, glandular swellings, etc. (*Ibid.*)

Notes and Queries.

VINUM MEDICUM.—The subscribers to the American Practitioner will read with interest the following part of a letter. Having read it, they will appreciate that fine womanly instinct which suggested its publication as a possible help to some dispirited doctor; and who of us is not at times cast down and almost hopeless! Those readers need not be informed the author's name; it is written in almost every sentence, it is uttered in the spirit of the whole. Nevertheless, *ex pede Herculem*.

And yet I see no way out of this life of worry and toil. Meantime I shall work on. Being on the treadmill, and the wheel knowing no rest, I must perforce keep moving. If I were to fall heir to fifty thousand dollars I should do no more professional work; but not having a rich relative in the world, I have no expectations in that line. If I were to draw a fifty thousand dollar prize in a lottery, I should give up business. But as I buy no chances, I am not likely to draw even a blank. So, like a very weak man as I am, I grin and swear and bear it. You don't do the middle of this trio, but I hope pray instead, which, I have no doubt, if not more satisfying, is at least followed by no stings of conscience. My income has lessened just one half in the last three years. It has fallen off, for the past four months, thirty-six per cent. on any similar time. At this rate, I shall soon be making nothing. This would stagger the bravest man, and take the courage wholly out of a weak man. And yet, when I come to talk among my brother chips of equal standing, I find they have the same reports—that the same shrinkage has occurred in their incomes. The same has occurred to all classes in this country. The only men in our profession who have gained are

the young doctors, who, in the natural course of things, have gathered here and there a case, now and then a patient. The whales have suffered most; the minnows least. Many of the small fish have given up the ghost, and more will follow. Had the times been prosperous, we would have prospered with them. The times have brought disaster to all branches of art and of industry. Medicine has suffered along with the rest—alike with many, more than some; less than others. Much of our business is, after all, a kind of luxury; people can, in the main, do without much of it, and just as in other things of this class they have been forced to do so. They have learned that, except in the severer ailments, a physician need not always and instantly be summoned; that an office *Rx* will often answer as well as a visit, and costs but half; that an attack of colic coming on after midnight does not, as in former times, necessitate an M. D., but can be as quickly relieved by a dose of oil and turpentine, at hand in the closet at a cost of a dime, as by a doctor and the regulation five dollar note.

We who follow medicine can no more escape the calamities which affect other classes than we can fly. If we align ourselves with the other professions and the other callings by which bread is won, we go back or forward as they advance or go back. It can not be otherwise. The same holds true as to our common country. The bad men North refuse to see that what hurts the South hurts them also; the fools South are too weak to realize that what injures the North injures both them and all who dwell at the remaining points of the terrestrial compass in America. No one portion of this country is or can be independent of the other, any more than medicine can be independent of other callings. Prosperity in one tells upon the prosperity of all—just as the present cold wave encircles the continent—just as the warm breezes from the Gulf will in time reach the lakes and dissolve the snow which lies now on all the earth.

The incomes of the rich have been cut; the salaries of officials have been cut; the receipts of commerce have been

cut; the wages of employés have been scaled in every direction; the agriculturist scarcely realizes cost on the products of his fields. The hand of want has been laid heavily on the poor. Can we, doctors, who depend for our bread on all those classes of our fellow citizens, expect to escape what presses on them so painfully? Can the fifty thousand good, bad and indifferent men, who prescribe pills and potions, powders and plasters—who straighten crooked feet and squints in eyes and cut for the gravel—who chop off legs and bring in babies and such other small deer, can they, I ask, hope to fare better than their neighbors, their friends, their patrons? Not at all—not at all. And it is the rankest folly to expect it. Times got bad, and receipts from our work fell off. Times grew worse, and our incomes diminished accordingly. And they always *will* diminish *accordingly*. Therefore, let us not despond. To do so is not manly, and is foolish. No good can come of it, and evil will. We are not a whit worse off than our neighbors. You are not a whit worse off than any one of the first ten men you will meet to-morrow morning when you start out on your rounds. If he be a merchant, your anxieties are no greater than his. If he be a laborer, your chances for calls are no less than his are for work. If he be a lawyer, the likelihood of his getting a client and a fat fee are no better than yours for getting a patient who will have a good paying disease. If he be a farmer, your face need be no longer than his, for your prospects are not one shade bluer. And then, has it never occurred to you, my dear brother in the bonds, that we have sources and resources which few of these friends of ours have? We have a consciousness of sympathy shown, of kindness rendered, of patience exercised, of good done and of skill exhibited, not only to the relief of suffering, but even to the saving of life itself. Have any of our friends such solaces as these? Not one. More:—Will not the same dews which fall on our friends, just or unjust, fall alike on us as well? Will not the same sun which will, in the course of the cycles, come to irradiate and revivify, and cause to grow and prosper the

various industries and interests of the nation, shine alike on us, poor sinners all as we are? Surely.

Therefore, O, friend that you are, look things squarely in the face, look at them as they are. Don't try to blink them. Some one has said things are seldom as good as we hope, or as bad as we fear. Times will improve and with them our fortunes. The day will again come when we will be summoned to see the little man with an abrasion of his umbilicus, and the larger man whose nerves the terrapin he had at the club have unstrung, and the great lady who, having no terrapins at home and nothing to wear or to do, first raises Cain and then sails into hysterics and refuses to be comforted. We will have all this, and more of the same sort, as of yore. When the means to indulge in them return, people will demand luxuries as in days gone by; and what greater luxury is there in the world than an agreeable doctor when a body isn't much sick, or a thoroughly good one when you are? So, I say, my friend, be not cast down. "Though much is taken, much abides." Let us, as Ulysses bade his mariners, still "smite the sounding furrows," and remain "strong in will to strive, to seek, to find, and not to yield." That's what *I* am going to do. If I can't get practice of physic to do I can practice economy, and that's the next best thing for the present. I am going to economize in horses, in clothes, and in the countless *et ceteras* in which we all do so love to indulge; I am going to economize in every way and in everything, save and except in my contributions to charities, which I hope will be the last to go, and in medical books and journals. The latter I will have, if to get them requires that I should deny myself all things else. For they, whatever may be said to the contrary, are to the doctor what capital is to the merchant, stock and seed to the farmer, and prices current to trade. They are simply indispensable.

When I began this on my lap, in front of the fire, I thought only of letting off an ordinary business letter. [I am just out of bed from my lumbago.] Yet see to what it has grown

Well, after I had written the greater part of it, I read it to my wife, whereupon she said, "Why don't you put that in 'Notes and Queries?'" It would do some dispirited doctor good, may be." Whereupon I said, "I'll leave it to Parvin." So, my dear fellow, if you think it suitable—that it will do any good—use it. You will see where to begin, change, or add or amend or burn, as you please. I am sure I never thought of writing it for print.

And now, good bye! I wish you, and all who are dear to you, a happy New Year, and a prosperous—even if the latter clause hinges largely on the ills of your friends; while I am always, my dear Parvin, faithfully yours,

D. W. Y.

A COURT OF CLAIMS.—*Two Questions of Priority.*—We think there is needed in the empire, or republic, of medicine a court to which should be referred questions of priority in medical discovery. Very frequently we see claims advanced in all honesty of belief, which are not just, and ought to be so characterized. Two such claims we shall now mention.

Dr. Emmet, in the second volume of the Transactions of the American Gynecological Society, foot-note page 453, remarks, "I have been unable to find it recorded that any operator, previous to this date, had washed out the uterus after evacuating retained menstrual blood through a free opening." This was June 6, 1864. Now if any one will turn to page 32, first volume of the *Clinique Medicale sur les Maladies des Femmes*, by Bernutz and Goupil, or to the Sydenham Society's translation, first volume, page 13, he will see that Delpech, in a case operated on in 1830, used repeated injections of warm water. So, too, if he will consult the article *Amenorrhée*, *Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques*, he will find that Bernutz, in discussing the treatment of these cases, remarks, "especially is it necessary to proscribe copious intra-uterine injections which have been recommended by Récamier, and which have quite recently been followed by a rapidly fatal hemorrhagic peritonitis in a patient operated on by Maisonneuve at the *Hotel-Dieu*."

Maisonneuve's operation was in 1862. It is thus evident that Emmet has been at least twice anticipated in his practice. However, few men have done so many able things in gynecology as Dr. E., and he can very well afford to give up this particular claim to priority, especially, too, as it is by no means certain the plan is a good one, and deserving professional indorsement.

And now as to claim number two. The December number of the Pacific Medical and Surgical Journal contains a report of "Enucleation of the Uterus for the Cure of Epithelial Cancer," by Professor L. C. Lane, and the editor remarks:—"We call attention to the report of this case as a novelty in its line. We are not aware of any similar case on record." We can hardly believe the editor means that vaginal extirpation of the uterus for malignant disease is a novelty; for, in addition to Blundell's four operations in 1828, or about that time, and the operations of Siebold, Holscher, Banner, Lizars, Récamier, Roux, and several others in foreign countries, J. P. Warren, of Boston, in 1829, removed the cervix and about half the body of the uterus without any injury to the peritoneum; and Paul F. Eve extirpated the entire uterus in 1850, this operation also being vaginal. Surely any claim in 1878 for novelty, to the removal of the uterus by the vagina, would be set down as worthy the bold assumption of the Tichborne claimant.

But then the enucleation of the uterus—its vaginal removal without incision of the peritoneum—is this a novelty? Not at all. Duparcque, *Maladies de la Matrice*, second edition, Paris, 1839, speaks of Langenbeck's method as characterized by dissecting off the peritoneum without opening it, and states that most operators, however, prefer opening the peritoneum so as to reach the broad ligaments and ligate them before division. So, too, the *Method of Dubled* is described by Malgaigne, *Manuel de Médecine Opératoire*, as *extirpation by dissection without opening the peritoneum*. We hope our Pacific friend is now aware of more than one "similar case on record" a good many years before Dr. Lane's.

TRANSACTIONS OF THE CINCINNATI MEDICAL SOCIETY.—At a stated meeting of this society, held January 7, 1879, Dr. William Carson, president, in the chair, the following discussion (reported by Dr. William Judkins) took place:

Dr. J. C. Mackenzie read the report of two hospital cases that had recently been under his care.*

The paper being before the society for discussion, Dr. C. G. Comegys remarked, in reference to the first case, that as neither clinical observation nor the autopsy, had revealed any inflammatory process, and as no sufficient lesion was found in any other organ, an explanation of the pulmonary edema and the double hydrothorax may be found in the proposition of atony of the extreme vessels—arterioles, capillaries and venous—productive of a stasis that allowed a more or less rapid transudation of the serum. Obstruction to the circulation exists not only in diseases of the heart, liver, kidneys, and from pressure on venous trunks, but from any cause that lowers in a serious degree the innervation of the muscular coat of the blood vessels. Paresis, or paralysis, superinduced by any cause, produces stasis and transudation of serum; and this will be more or less rapid, according to the loss of the muscular tonicity. It is seen to be extremely rapid after frost-bite, or snake-bite, and notably in Asiatic cholera and cholera infantum, where extreme atony of the vessels of the intestines leads to such rapid and fatal transudation, serous diarrhea. It often is one of the moribund conditions, and therefore not available in clinical observations.

In this case of Prof. Mackenzie, I think the serous lesions were dependent on atony of the vessels. The ascites and edema of the lower extremities, so frequently seen in intermittent fever, are due to atony; and the hypertrophy of the liver and spleen, so common in malaria, is often due to transudation alone.

Dr. Carson mentioned a case of phthisis that was in the old St. John's Hospital years ago. The patient was walking in the yard; began expectorating blood; ran for the house, but died

* Dr. Mackenzie's report is given in full in this number. (See page 33.)

from profuse hemorrhage before reaching the same. A careful post mortem examination was held, but could find no sanious cavities or anything else to account for such a loss of blood. Venereal history was unknown in this case; think the kidneys are liable to be greatly at fault where we have a large amount of fluid in hydrothorax.

Dr. Mackenzie spoke of a case where, by the use of the aspirator, he had drawn off over one hundred ounces of pus. Bronchial breathing in this case, for the reason the bronchi were not compressed.

Dr. Carson has known pneumonia diagnosed when pleurisy existed with effusion, because of transmission of respiratory sounds through the fluid.

Dr. Goode called attention to the differential sign of fremitus—will not have it in pleurisy.

Dr. Thomas, of Covington, asked if the first case reported by Dr. M. had been treated in the hospital for venereal trouble, and was answered in the negative. He had had three cases of phthisis lately; two died suddenly from hemorrhage; the third has now semi-occasionally severe hemorrhage from the lungs and nose; there was a venereal history in all of them. The second case had taken to excessive eating after the tertiary trouble presented itself.

Dr. Comegys reported a case of constitutional syphilis in a young lady who came to him with a suspicious erythema of the face and arms; had a sore on her lip; no cervical, glandular enlargement; everything cleared up under the use of hydrarg. prot. iodide. He had every reason to think that the initial sore on the lip came from a kiss.

Dr. Carson has had two such cases in his own practice, and knows of another where a young lady was kissed by her brother-in-law, who had at the time syphilis; a hard sore followed, erythema, etc. She has since married, and had healthy children.

Dr. C. P. Judkins stated that of different remedies he had used, in making a differential diagnosis between a hard and soft sore, the sulphate of copper had proven the most satis-

factory. After an application to the former there was some hemorrhage, and a matted white look over the surface; had no such appearance in the soft sore. There was no doubt in his mind that the poison can be communicated by a kiss; it was now an accepted fact that the virus can be introduced anywhere upon the mucous membrane or cuticle.

A FATAL BOX ON THE EAR.—An inquiry has just been concluded at Willingham, Cambridgeshire, into the circumstances leading to the death of a boy named Arthur Dines, about eight years of age. It appears the deceased was attending the board school at Willingham, and that on the afternoon of Nov. 27th he went to school quite well, but returned home between four and five, looking white and ill, and holding his head towards his left shoulder. He stated that he had been struck over the right ear by the monitor of his class at school. The next morning the poor boy was too ill to go to school. He was seen on different occasions by Mr. Buller, Mr. Ellis, and Mr. Grubb, surgeons in the neighborhood, and they agreed the boy was suffering from cerebral disease, caused by a blow or fall. The patient gradually got worse, and eventually died on Dec. 7th, the last words he said being that the monitor "Hit me in school." This statement was confirmed at the inquest by two of his school-fellows, with this discrepancy, that one stated the deceased was struck by the monitor four times with the flat side of a slate; the other that the monitor had only struck once, and then with his open hand. It was this discrepancy of evidence, coupled with the fact that the deceased had made no complaint to the master, that no doubt caused the jury to qualify their verdict with the statement that the evidence before them was insufficient to justify them in saying by whom the blow was administered, although there was no doubt that the boy died of disease of the brain, and that disease was accelerated by a blow. This is another illustration of the extreme danger attending the practice of inflicting punishment by boxing the ears, and, we may add, of any part of the head generally, since it is a fa-

vorite practice with some masters to rap their pupils' heads with the bent knuckles of the index and middle fingers. In sound, healthy lads, a box on the ears may not perhaps lead to fatal consequences, though there is always a risk of inducing deafness by rupturing the membrana tympani. In delicate boys, of strumous or tubercular tendency, fatal consequences may be easily induced, and a master, by giving way to a moment's irritation and an error of judgment, may forfeit a position gained by years of honorable toil, be imprisoned for manslaughter, and thus ruined for life. (Lancet.)

NEGLECT OF CREDIT.—The New York Medical Record of a recent date contained an abstract of Dr. Marvin's excellent paper upon Yellow Fever, published in the American Practitioner, but failed to credit this journal.

A similar sin of omission is to be recorded of the Hospital Gazette, December 12th, which gives an extract from one of Dr. Yandell's letters, but no mention is made of the American Practitioner, in which the letter was published. Since we come again to notice the introduction of the extract, we observe Dr. Yandell's name is not given, but a Dr. Tandell is credited with it. Now who is this Dr. Tandell that has been purloining Dr. Yandell's letters; and in what journal has he published them, so as to impose on the Hospital Gazette?

Gentlemen, you are welcome to increase the interest and enhance the value of your publications by material from the American Practitioner, but please give credit.

INDEX MEDICUS.—F. Leyboldt, No. 37 Park Row, New York City, proposes to publish, under the above title, a monthly classified record of the current medical literature of the world, compiled under the supervision of Dr. John S. Billings, Surgeon of the United States Army, and Dr. Robert Fletcher, M. R. C. S., England. The names of editors and publisher are guarantees of the value and appearance of this proposed publication. We heartily commend it to professional support.

EVIL RESULTS OF NEWSPAPER NOTORIETY.—From the Paris correspondent of the London Lancet, January 4, we make the following extract, hoping that some doctors who are perpetually seeking newspaper fame will take warning:

The *Paris Médical* takes Professor Charcot to task for an eulogistic article published in the *Figaro*, and in which the celebrated physician is represented as the renovator of modern science. A series of articles, tending to the same conclusion, has lately appeared in the *France*, in the *Petit Journal*, in the *Charivari*, and various political and humoristic papers. The rather unenviable celebrity which the learned professor has thereby acquired, much to his annoyance and entirely against his desire, may perhaps serve to explain his unexpected failure as a candidate for the Institut (Academy of Sciences), where, at the last election, he only polled three votes out of fifty-nine, Professor Marey being the successful candidate. The *Paris Médical* goes on to say that medical men and students are unable to obtain entrance to the lectures, owing to the throng of the general public, "Whilst shopmen and clerks are present at what they call the Salpêtrière *tableaux vivants*. We know," says the *Paris Médical*, "an *employé* who amuses himself every Sunday at this hospital. All last week the salesmen at the Bon Marché (a large drapery establishment) were joking about the women they had seen the previous Sunday. It is deeply to be regretted that these exhibitions (*sic*) are not reserved exclusively for the profession."

DR. BLUNDELL'S PARTIAL ANTICIPATION OF BATTEY'S OPERATION.—In a paper in the Lancet, June, 1829, on the Surgery of the Abdomen, Dr. Blundell makes the following observation: "*The Extirpation of the Healthy Ovaries*.—This operation, even granting it to be safe, can scarcely in any instance be necessary, though it may be observed by the way, that it would probably be found an effectual remedy in the worst cases of dysmenorrhœa, and in bleeding from monthly determination of the inverted womb, when the extirpation of this organ was rejected."

THE NATIONAL MEDICAL REVIEW.—This is the excellent title of the last addition to American medical journalism. This recent candidate for professional support is edited by Dr. Walter S. Wells, contains valuable original matter, judicious selections, is well printed, and is of course published in Washington City. We have long believed that the National Capital was the best place upon the continent for making the best American medical journal; not probably the most successful as a financial venture, for not as mere money-making expedients do the best things in science and literature come. No where in the United States can a medical editor, learned and scholarly as all medical editors are supposed to be, so certainly and so well find what has been done and is being done in Medicine, as in Washington. There is the National Medical Library, with its treasures not merely old but new, for into that great reservoir streams of all valuable publications—whether books, pamphlets or journals—are continually flowing. Whether the new journal will be worthy its name and its opportunities, remains for the future to determine.

THE METRIC SYSTEM.—At the regular weekly meeting of the Richmond Medical Club, held Friday, January 10, 1879, Dr. Jutzi called attention to the propriety of adopting the metric system of weights and measures. As a means of testing the sense of the club, Dr. Hibberd moved “that on and after the first day of March next, the members of this club will use the metric system to designate quantities in writing prescriptions.” After full and free discussion, the motion was adopted without a negative vote. Dr. Hibberd was requested to communicate this action to the American Practitioner, and to have notice of it published in the city papers for advice to apothecaries.

PROF. W. H. GOBRECHT, M. D.—This able and distinguished teacher of anatomy now occupies the anatomical chair in the Fort Wayne Medical College. The school is peculiarly fortunate in securing such an important accession.

POSITION OF THE PLACENTA INDICATING SEX.—Dr. Thomas B. Tuckey, in the Dublin Medical Press and Circular, March, 1878, and more recently in the Practitioner, December, maintains that when the placenta is attached to the left of the median line the fetus is female, and when to the right of that line the fetus is male; in other words, the boys come from the right ovary, and the girls from the left! This notion as to the relative functions of the ovaries is quite old. Melancthon went a little farther than Dr. Tuckey, and was equally rational when he put the right and left testicles in partnership with the corresponding parts of the womb in the determination of sex. This famous reformer of the sixteenth century—his theology, we hope, was better than his physiology—made the following statement, which in positiveness is quite equal to any of Dr. T.'s conclusions: *Mares nascuntur magis in dextrâ parte matricis, et a semine quod magis a dextro testiculo oritur. Fœmellæ in sinistrâ parte nascuntur.*

Dr. Tuckey's theory has no more substantial ground than Melancthon's. In the first place, it is extremely doubtful as to the placenta being attached in the majority of cases to the right or left of the median line. Next, according to the best authorities in obstetric auscultation, the *souffle*—once known as *placental*, now called *uterine*—is not a guide to the position of the placenta. Third, certain orders in the animal world have but a single ovary completely developed and active—this ovary, of course, being quite as competent to produce one as the other sex. Finally, facts which any ovariologist who has had many successful operations could give, would knock this effete, absurd theory to the depths of oblivion.

Dr. T. suggests, apparently with child-like innocence of all knowledge of what ovariologists have stated in this regard, that conclusive proofs or disproofs would easily be collected, "if any of our great ovariologists could be got to turn their attention to the matter." Now if this gentleman had read Spencer Wells's Diseases of the Ovaries, he would have found that at least one great ovariologist had turned his attention to the matter; learning the conclusion of such attention, Dr. T. could hardly attempt the resuscitation of a dead theory.

PROTEST AGAINST POLYPHARMACY.—The following extract from the second volume of Dr. Latham's works, recently issued by the Sydenham Society, will, if not meeting with the hearty approval of the majority of physicians, at least furnish subject for reflection to all:

Fortunate the man who can get rid of an asthmatic attack on any terms; but unfortunate the art that is content with a rare fortuitous and unaccountable success; it must be either retrograde or stationary. To scatter above twenty remedies, and let hit which may, is like pigeon-shooting in companies. The bird falls; but whose gun was it that brought it down? Nobody is reputed a better marksman after a hundred volleys. With all the credit due to pharmaceutical chemistry, and all our obligations to it, I doubt whether, in one chief respect, it has not done some harm. To bring many important remedies together, and unite them by a lucky combination, and compress them within a small compass, and so place them within the common reach, all this gives a facility of prescribing which is hurtful to the advance of medical experience.

LECTURES ON THE SURGERY OF THE FACE.—The Lettsomian Lectures for 1878, which were delivered by Francis Mason, Esq., F. R. C. S., on the Surgery of the Face, consisted of three lectures. They were published in the *London Lancet*, with but a few of the drawings used by the lecturer for illustration. Mr. Mason was good enough to furnish us with a complete series of all the woodcuts, and they will be brought out for the first time in the *American Practitioner*. A fourth lecture, to consist of an abstract of Mr. Mason's work on Cleft Palate, will be added. The series will be all that is best and latest on these interesting subjects, of which the author is a recognized master.

OUR LONDON LETTER.—We regret to be obliged to go to press without a letter from our London correspondent, but the January number can not longer be delayed. A similar mishap is not likely to occur again. The loss to our readers shall be made good by one or more extra letters from occasional correspondents during next summer.

THE AMERICAN PRACTITIONER.

FEBRUARY, 1879.

Certainly it is excellent discipline for an author to feel that he must say all that he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

Original Communications.

ORIGINAL LECTURE.*

A CLINICAL LECTURE ON ANESTHETIC LEPROSY.

BY JAMES NEVINS HYDE.

Gentlemen: The patient before us gives the following history of his case: His name is Augustus Brusher. He is forty-two years old, unmarried, by occupation a sailor, and was born in Oswego, New York. His parents were healthy; his father was of French and his mother of Dutch descent. He has two brothers, and a sister who is the mother of four children: all these relatives are in good health. When sixteen years old, he ran away from home and made a two-years' whaling voyage in the Okhotsk sea. During this cruise he spent, in all, some fourteen or fifteen weeks at Honolulu, in the Sandwich Islands. On his next cruise he deserted his ship when at Honolulu, and was there seven months before shipping on another whaler. His next cruise lasted three years; and during this time he spent, in all, five months at Honolulu.

* Delivered at the Dermatological and Venereal Clinic, Rush Medical College, Chicago, December 12, 1878.

Returning to this country in 1861, he enlisted in the Fourth Regiment of New Hampshire Volunteers, but was transferred to the United States Navy in 1862, serving first on the "Minnesota," and afterward on the "Queen," during the late civil war. In 1863, he was sent to the Asiatic squadron on board the United States ship "Iroquois," and touched at Shanghae, Hong Kong, Yokohama, and other eastern ports; but in none of these was he ashore for more than two days at any one time. His next cruise was made on board the United States ship "Tuscarora" in 1864, the vessel conveying an official commission to the West Indies. But little time was spent by him in any West Indian port. Since the year 1864 he has been cruising on the eastern coast-line of the United States.

During all these voyages, he admits that he has indulged without restraint in the diversions of the average sailor. He has drunk liquor freely, and, in all ports where he has been ashore, has engaged in sexual intercourse. During his long periods of residence in Honolulu, he continually gratified his sexual desires with native women. Throughout all, however, he assures us, in the most positive manner, that he has had but a single venereal accident, and that was, six years ago, a urethral discharge which lasted but three days. It was relieved without consulting the ship's surgeon. He has never had genital sores, ulcers in the throat, loss of hair on the scalp, lumps in the groin, pain in the bones, nor, prior to his present illness, any eruption upon the skin. He has never had scurvy. Twenty years ago he suffered from a slight attack of chills and fever, and later from a mild rheumatic affection, unaccompanied by fever, affecting chiefly the back and shoulders.

The patient assures us that, with the exception of the disorders we have named, he had always enjoyed perfect health till the year 1874. Then his troubles began with a painful pricking, itching and tingling sensation in the soles of the feet, succeeded by a gradually increasing feeling of numbness, "as though the feet were asleep." Locomotion soon became painful; he felt as though he were "walking on a stone-

bruise." Later, the painful pricking and tingling sensation was perceived in the palms of his hands, which also soon became numb. Suddenly a "blister," as large as a pigeon's egg, appeared on the internal face of the left index finger, over the second phalanx, fully distended with fluid, and unaccompanied by pain. This he pricked with a pin, and thus gave exit to a "bluish-stained" fluid, which streamed from the finger. Immediately a deep black scab formed over the part, which soon dropped off, and disclosed a correspondingly deep ulcer. This healed without delay. In its near vicinity a second "blister" speedily formed, similar in size and contents, colored externally like the skin. Its course was the same as that of the bleb which preceded. It gave exit to the same fluid contents, and was followed by similar scab, ulcer and scar. A third "blister" formed over the right first metacarpal bone, similar to the others except as regards its size. It was larger than they—as large as a turkey's egg; and its resulting ulcer, beneath a coal-black scab, penetrated nearly to the bone. Other bullæ succeeded, one over the right ulna near the wrist; another, somewhat higher up, on the ulnar side of the forearm. The latter had a "scab nearly half an inch in thickness, and its sore touched the bone." Others followed on the ulnar side of both forearms; and, after the appearance of the last of these, others yet, of similar aspect and career, upon the peroneal side of the left leg, just below the external malleolus. He says that, altogether, he has had "hundreds" of these lesions on his extremities, none of them occasioning any pain.

The patient tells us that his visual power is weakened, but that his senses of smelling, tasting and hearing are unimpaired. His alvine dejections are usually normal, though at present he is suffering from slight looseness of the bowels. His urine is normal in color, and passed without pain. At night, he is often disturbed by restlessness. As to his sexual powers, he informs us that he is "not nearly the man he was." His erections are transitory and imperfect; his seminal discharges scanty and infrequent, and his desires to a great

extent weakened. Since the beginning of his troubles, his weight has gradually diminished from one hundred and seventy-five to one hundred and thirty-five pounds. He narrates to us this history with the intelligence and clearness of an unimpaired mind.

Let us now examine him physically. You all see that he is a man of average development, spare in flesh, though not emaciated. His gait, as he moves from side to side of the amphitheater, is a painful limp. The gray hair on his scalp is abundant; his eyes, of a grayish-brown color, are coördinate in their movements; his sparse and short-cut beard is also gray; his facial expression is apathetic. The general tint of his skin is a yellowish bronze. There is slight diffuse redness of his unwrinkled forehead, where he complains that he notices occasionally a pricking and itching sensation. Pinched up between the thumb and finger, this portion of the integument seems to be irregularly thickened; but we can detect here no tubercular masses. The brows are perceptibly full and prominent, and quite destitute of hair. The eyelashes have disappeared from both upper and under lids of each side, but a few filaments can be discerned as the remnants of the upper eyelashes. The globes of the eyes, the ears, lips and alæ nasi are normal. The buccal mucous surfaces are pallid, but free from lesions. The teeth of the upper jaw are generally destroyed by caries, as is evident from the stumps remaining: those of the lower jaw project from retracted gums, the exposed surfaces being smeared over with a whitish mucoid secretion. Upon each of his extremities, figures of various devices have been produced by tattooing the skin with India ink. He assures us that he never suffered from sores or other untoward symptoms in the site of the punctured wounds inflicted during the process of tattooing.

Over the distal extremity of the right fifth metacarpal bone, in the palm, is a moderately distended, pearl-tinted, semi-globular bleb, resting on a base two centimeters in diameter. At its line of contact with the skin, it is girdled with a delicate vascular zone, light purple in hue, about one millimeter

in width, encroaching equally upon the wall of the bulla and the integument. Its roof is evidently constituted of the entire thickness of the epidermis. Pricked with a lancet, an opalescent fluid slowly exudes from beneath in quantity sufficient to drip from between the fingers, the elevated epidermis meantime returning to the reddened floor of the lesion. It has formed, he tells us, within the last twenty-four hours, and is the sole lesion of its kind now visible upon his person.

Over the inner face of the third phalanx of the left index finger, are two ill-defined cicatrices, with a dense, split-pea sized, whitish center, surrounded by loosely agglomerated scales, resting upon a slightly hyperemic surface. The interossei muscles are wasted. On the ulnar surface of the left forearm, are four roundish atrophic patches, averaging five centimeters in diameter; and on the corresponding surface of the right forearm are three others of similar aspect: the largest of all being here visible, and measuring exactly in two diameters seven and four centimeters. The general appearance of these atrophic disks may be described as follows:

The center of each, without exception, is a dense white flattened spindle-shaped mass, three to six millimeters in width and one to two centimeters in length, not elevated above the general surface, but perceptibly differing from the rest of the cicatriform tissue by its resistance to the pressure of the finger. From this center extends peripherally, in every direction, an indistinctly radiated, smooth, dry, glazed and glistening surface, readily wrinkled by the touch, of mica-like tint, differing thus from the dead white central mass. Bronze-colored streaks can be seen in some of these patches. The contour of each is clearly defined by the adjacent integument, often in a delicately crenated line. This line of demarcation usually affects the arc of a circle: in one instance only however, (just below the left elbow), can this be described as completely circular. In several cases the periphery is that of an obovate leaf, the resemblance to which is further suggested by the white flattened spindle-shaped center, whose diameter in general corresponds to the longest measure of each lesion. When

two of the latter are conjoined, the appearance is that of a section of a dumb-bell with irregularly outlined extremities. Center and periphery alike are totally insensitive to deep thrusts of the lancet. The integument surrounding these lesions is markedly pigmented in excess, to the extent of several millimeters; the hue is a light chocolate, fading gradually off into the general tawny and bronzed tint of the skin. Partial anesthesia exists also in the surrounding integument. The cicatriform lesions are no where attached to the deeper structures, can be readily gathered up with the fingers, and, when thus handled, are thrown into wrinkles, the whole feeling like the tissue of a dried bladder. None is surrounded with an erythematous, congested, vascular or lilac-tinted border; nor upon any is there a trace of scales, or pilary, sudoriparous or sebaceous elements. The patient thinks that the area of these has not extended beyond the limits defined by the original bulla in each instance. The underlying muscles are manifestly atrophied, their motor activity seeming to remain unimpaired.

The palms of the hands, in contrast with the dorsal surfaces, are of an unnatural dead white hue; and suggest the similar contrast in the hands of the negro. The right hypothenar eminence displays an atrophic patch similar to those seen over the forearms. The smooth, long, claw-like and longitudinally-arched nails are colorless as the palms, and turned toward them. The visible wall of the vallecule is noticeably flattened and deprived of its limitary features. The distal phalanges are slightly flexed. He tells us he has himself wondered at those changes. All parts of the fingers and hands are insensitive to the prick of the lancet, with the exception of a few isolated palmar points.

The surface of the trunk is indistinctly and irregularly dyschromic. Beneath the sternal extremity of the left clavicle is a whitish patch, fairly well defined, two centimeters in diameter, with circular, faintly determined outline, beyond which is deeper annular pigmentation, of light chocolate tint, two millimeters wide. Similar, less defined and much larger patches

are visible on the anterior face of the belly and back. Here there is a slight disposition toward symmetry, the deeper pigmentation affecting the flanks and nates; the lighter, the regions of the linea alba and dorsal spines. The penis and scrotum are unusually lax and flaccid. The prick of the lancet is generally perceived by the patient over the trunk; but he yet complains that in all parts of his body, his skin feels "unnatural." There are no cicatriform lesions upon the trunk, nor evidences of cutaneous infiltration. There is simply general dyschromia: to the touch it feels, in all parts, like a dry, faultily nourished skin.

The thighs exhibit, much more distinctly, the phenomena noted above on the trunk. Upon the antero-lateral and posterior faces of each are dead white patches, varying in size from that of a small saucer to a dinner plate. They are uniformly of a dead yellowish-white tint, never exhibiting the milky whiteness of the so-called "piebald skin." They have clearly defined borders in irregular curves, limited beyond by dark color lines of mixed chocolate and bronze, which gradually fade away into the average color of the skin previously described. All the femoral patches are totally anesthetic; but the anesthesia is not strictly limited to these, as it is evident that sensation is abolished or diminished in the outlying integument. Thus, you observe, that a distance of four centimeters from the edge of a patch above the outer condyle of the right femur, the prick of the lancet is not felt.

Along the peroneal surface of the left leg are eight crusted lesions. The smallest of these is circular and of nummular size; the largest, upon the lower third of the leg, is elliptical in contour, and measures ten by six and a half centimeters. Each is covered by a dead black, externally roughened, firmly adherent crust, of moderate uniform thickness, in no instance laminated, or presenting other rupioid features. From beneath the largest, when it is torn from its attachment, oozes a reddish sero-pus. The oval ulcer thus exposed does not rest upon an indurated base. Its edges are sloping, neither clean-cut nor undermined. Its floor is a reddish pulp, which can

be scraped away, without producing pain, to the depth of the subjacent fascia. There is here no trace of granulation, hyperemia, capillary hemorrhage, or active inflammatory process. I plunge the lancet to the depth of half an inch in several points of the adjacent integument, and the patient is not aware of the act. From one or two of the deeper wounds, a few drops of blood escape. The anesthesia is told in both feet and legs to the level of the tibial tubercles. Beneath the left external malleolus is a cicatriform lesion, similar to those seen upon the arms. Here, he tells us, as also in the site of crusted ulcers, were once "blisters."

The sole lesion upon the right foot rests above the external plantar edge, over the epiphysis of the os calcis. It looks like a roughened, black, fissured tubercle, of the size of a walnut. Inspected closely, however, it is seen to be similar in character to the crusted lesions of the other leg, differing only in consequence of the dense horny epidermis, where the dried scab has formed.

The plantar surfaces are of the same dead white hue as the palms; and the nails of the toes have undergone the exact changes noted in the fingers—only the right big toe shows by transparency a trace of the vascular tint beneath. In both legs, atrophy of the muscular tissue is most evident on the peroneal surfaces. The general color is here the darkest of that seen anywhere over the surface; it is a deep bronze, deepest on the dorsum of the feet. The integument, when handled, feels much like a piece of dried fish-skin. We learn that some edema of these parts has been relieved by rest and elevation of the limbs. The general aspect of the left leg suggests the limb of a tree, with roughened, partially-burnt bark irregularly displayed upon its surface.

The ulnar nerve of each side feels to the touch like an indurated, thickened cord. We are unable elsewhere to recognize a similar lesion. There is adenopathy of the inguinal regions only—the glands of each groin being enlarged to the size of a pigeon's egg, dense, elastic to the touch, and painless.

There is but one disease, gentlemen, which displays the assemblage of symptoms we have just observed, and that is leprosy—the *LEPRA* of our new nomenclature: the *elephantiasis Græcorum* of the old. It is here presented to our observation in its strictly anesthetic form. The symptoms of the three varieties of this new growth of granulation tissue—the tubercular, macular and anesthetic—are often commingled. Each group may precede or follow each other, and thus constitute a mere stage in the development of the constitutional disease. It is rare to observe a patient whose symptoms, as in the present instance, may be so exclusively classed under the anesthetic title.

I need not add that the disease, in any form, is rarely encountered here. All told, there are probably not more than one hundred lepers in the United States. They have been reported in South Carolina, Louisiana, Maryland, New York, California, Minnesota, Illinois; and probably are to be seen in other states of the Union. This is the fifth patient affected with the disease, of which I can find a history in Chicago. Two, exhibiting tubercular symptoms, have been reported to me by Dr. Paoli, observed in his practice among the Scandinavians of this city. A third, also of the tubercular variety, was, a few years ago, an inmate of the County Hospital. The fourth leprous patient was exhibited to the Chicago Medical Society by Dr. Holmboe, Surgeon to the General Hospital at Bergen in Norway, who made, in 1863, a tour throughout the Northwestern States, for the purpose of investigating the prevalence of the disease among the Norwegian immigrants.*

As it is thus rare, we must be especially careful to make no error in diagnosis. If we review, to this end, the sum of the objective features just considered, we will be at once struck with the polymorphism of the disease. Here we have coincidence of ciliary and superciliary alopecia, a single bulla, slight frontal erythema, atrophic patches ranged along the tracts of certain nerves, plates of pigment anomaly, crusted ulcers, adenopathy, anesthesia, muscular atrophy and obscure

* See the British and Foreign Medico-Chirurgical Review, January, 1870.

nutritional changes in the skin and nails. What a rare and heterogeneous collection of symptoms! It reads like the miscellaneous catalogue of a dealer in *bric-à-brac*.

But polymorphism, or multiformity—the words are alike in etymology and meaning—is true also of other diseases, notably of syphilis and scabies. As syphilis, in many of its phenomena, bears some resemblance to leprosy, let us ask whether, in the particulars mentioned, we can establish a differential diagnosis.

Syphilitic alopecia affects the hairy scalp; rarely, if ever, the brows and lids exclusively. Notice the abundant growth of hair upon the scalp of our patient. Pemphigoid lesions are common in syphilitic infants, but extremely rare both in the congenital and acquired disease of adults. They were named by Alibert, “pemphigoid pustular syphilides;” and have been observed, once only, by Ricord, on the soles of the feet; once only by Bassereau, on the palms of the hands; once only by Morgan, in a woman twenty-six years of age; never by Zeissl in twenty years’ experience.* They have purulent contents, an indurated base and a copper-tinted zone; are indolent, painful, and usually occur in groups, never in an order of succession. How different, before its collapse, was this pearly bleb, rising abruptly from the integument, its base outlined by the delicate purple girdle we observed!

Syphilitic “*roseola*” is rarely attended with sensations of pricking and tingling; moreover, it is seen on the trunk as well as the face, and occurs among the earliest of syphilitic symptoms. The erythema you see here is associated with subjective sensations, and is a diffuse redness, limited to the lower portion of the forehead. Moreover, in the case of our patient, we have no reason to suspect recent infection. Syphilitic pigmentary anomalies occur, either about certain typical and more important lesions, or, when isolated, are seen chiefly over the neck and shoulders of women. In this situation they form an irregular network, none of whose meshes are as

* Parrot. Clinical Lectures on the Bullous Syphilide. *Le Progrès Méd.*, 1878, Nos. 1 and 4.

large as a dinner-plate, of a yellow and gray hue, and are never anesthetic. The cicatrices of syphilis are often, indeed, smooth, white, slightly depressed and glistening, with a circular border; but they never show the dense, white, central band you see here, are never anesthetic, are never ranged along nervous tracts, and are usually asymmetrical; while, here, the implication of each ulnar nerve (in the manner I shall presently describe), has produced a certain degree of symmetry. Syphilitic ulcers are often circular and indurated, and have clean-cut edges, undermined walls, and a grayish pultaceous floor. But here, on the contrary, is an entire absence of induration at the base, an irregularly oval outline, sloping edges, and a floor covered with a reddish insensitive pulp. The scabs of late syphilis are frequently greenish-black in color, but they are usually laminated and conoidal in shape; while the crusts before us resemble rather the bark of a tree than an oyster-shell. The eccentric phenomena of nervous syphilis are in general associated with paralyses of curiously-selected nerves. Here, there is paralysis of sensation only—an anesthesia which is so generalized that it gives to the disease a characteristic physiognomy. In syphilitic onychia, the matrix of the nail is usually involved; while the changes you observe in this case are confined to the body of the nail itself. In short, it is clear that we might search the literature of syphilis in vain for any picture such as that here presented to us.

Again, the decolorized patches upon the trunk and thighs of our patient might be mistaken for either vitiligo or morphœa. But the patches in vitiligo are never of the dead, yellowish-white color you observe here; they are rather milky-white, and are, moreover, never anesthetic. Except in the mere matter of pigment atrophy, they differ in no respect from the normal skin; and there is no constitutional impairment. Vitiligo is a rare affection of the skin; but a few weeks ago I had the opportunity of carefully examining, with Dr. D. A. K. Steele, a gentleman exhibiting this anomaly, and the contrast between the two patients, in the hue of the decolorized

patches, is vivid to my eyes. Mr. Hutchinson, of London,* has described some seven or eight points of difference between these leprous lesions and vitiligo; but the observation of our patient would only justify us in accepting the distinction between the two, based upon color and sensation. Morphœa is still more readily differentiated, for its patches, though white in color, are distinctly lardaceous; there is textural change in the corium, and always a peripheric ring of a lilac or violet color, due to vascularity. There is, beside, no anesthesia, nor constitutional impairment.

Distinguishing, furthermore, this anesthetic from the tubercular form of the disease, we note the entire absence of the disfiguring tubercles and infiltrated masses, which, clustering around the brows, nose, lips and ears, produce the deformity that, at an earlier day, gave to the malady one of its many names, leontiasis. These lesions are, however, found in other parts of the body than the face—even in cases upon the mucous surfaces. We note, further, the absence of those erythematous and circumscribed areas of infiltration, looking like pieces of raw bacon let in to the skin, which are described by most writers in connection with the macular variety of leprosy. In most of the photographs which I now show you, taken of leprous patients in the Sandwich Islands and the East Indies, you will notice, beside the lesions we have described, infiltration of the skin in large districts, and such ultimate results as the loss of fingers and toes, devastating ulcers of enormous size, ectropion, destruction of the ocular globes, and a malignant constitutional vice, which renders it difficult to recognize in these hideous objects the vestiges of healthy human life.

The pathology of anesthetic leprosy is well illustrated in the drawings I show you, copied from the plates of Virchow. Here are a series of nerve-fibers, exhibiting all stages of involvement, from the normal condition to the gradual deposition, within the nerve fasciculi and in the interstitial substance, of closely agglomerated cells—the “hyalin-fibroid” of

* Lectures on Clinical Surgery, London, 1878, p. 33.

Carter.* Here they have squeezed and compressed the fibers to such an extent, that we can thus well explain the hyperæsthetic symptoms. Here, again, they have produced complete atrophy, and the nervous elements are represented by slender and wasted filaments, leaving the areas formerly supplied by each nerve completely insensitive. Remembering the association between several forms of herpes zoster and neuritis, we can well understand how, at the outset of these grave neural changes in anesthetic leprosy, successive crops of enormous bullæ should appear, rapidly pursue their course, and leave an integument behind where the ordinary processes of repair seem singularly perverted. In tubercular leprosy, a small-cell brood of degenerate connective tissue corpuscles pervades the epidermis in a similar manner, the process advancing in the vicinity of the glandular and vascular elements. It is the breaking down of this tissue which ultimately results in ulceration, necrosis and deformity.

The etiology of leprosy is certainly unknown. I shall not waste your time by rehearsing, in this connection, the theories of writers who have looked for the causes of the disease to the air, the water, the soil, the fish and other articles of diet, and even, as lately Dr. W. Munro of Manchester,† to the absence of salt in the food. But here is a man who has been inhaling the saltiest of salt air for nearly a quarter of a century, and consuming for the same time the salted food of the sailor, who yet secured thus no immunity. Neither have I the patience to discuss the doctrine that syphilis is the cause of leprosy—a doctrine chiefly supported by physicians in the Sandwich Islands. I can not doubt that hundreds of lepers at Molokai have displayed the symptoms of the two diseases, since we are told that this is the case; but if the phenomena we have just observed are the distinctive features of syphilis, then indeed we must admit that our every-day experience has

* Paper read before the Royal Medical and Chirurgical Society of London, March 25, 1873.

† Series on the Etiology and History of Leprosy. Edinburgh Medical Journal, Vols. XXIII and XXIV, 1878.

failed to teach us aright, and the masters of our science have been led astray.

Evidence as to the contagiousness of leprosy is equally unsatisfactory. The fact that healthy wives with leprous husbands, and healthy husbands with leprous wives, have cohabited for years, and produced children without transmission of the disease, is a strong argument against its contagiousness, especially so in view of the fact that wife and child so often pay the penalty for the sins of a syphilitic father. I believe that the English version of the Hebrew scriptures has greatly contributed to the general impression regarding the contagiousness of leprosy. Even so eminent an authority as Mr. Erasmus Wilson, in his rendering of the thirteenth chapter of Leviticus, has substituted the word "contagious" for the word "unclean." But the thirteenth chapter of Leviticus is not an essay on the diagnosis of leprosy. It is a compilation of arbitrary rules for the guidance of the priest in admitting or excluding Israelites who approached the sacred tent in the center of their camp. All question of inspiration aside, the Hebrew scriptures were not designed to be a guide in astronomy or medicine, but as a code of religious ethics. The "uncleanness" of the Israelite was a *ceremonial* uncleanness, removable by the offering of certain sacrifices. It appertained not only to the leper, but also to the men affected with psoriasis, scabies, and other skin affections, whose prevalence in the camp is evident in the record left us. It appertained also to the menstruating woman, the man who had recently had a seminal emission, and the dead body. In these sacred writings of the Hebrews, we have even presented to us the picture of the "leper" Gehazi in the court of a prince of Israel; and a Syrian king entering the temple of his god, while leaning on the arm of his "leprous" general-in-chief. Mr. Wilson would scarcely call a "common boil" contagious, and yet this is enumerated also in the list of "unclean" diseases.

It is probable that leprosy is transmissible by heredity, though it by no means follows that the children of leprous parents will become the victims of the disease. The patient

before us has stated that his father was "healthy," but he told me in private that, before the death of this parent, "one of his toes dropped off." This certainly required further investigation, and I therefore consulted Prof. J. Adams Allen, who, as I learned, attended the father of our patient in his last illness. Prof. Allen informs me that the latter was a hale and hearty old man, who died of senile gangrene in his eightieth year: he had no other symptoms of disease. The toe became exceedingly painful; and when gangrene finally supervened, a distinct line of demarcation formed about the part. These are not the features of leprous disease, nor, if they were, would they possess any significance in the case of a man who had enjoyed robust health for eighty years of his life. We have no evidences, therefore, of hereditary transmission of the disease to the patient we now have before us.

(The leper was then removed from the room at the request of the lecturer.)

In considering the question of prognosis, it occurs to me that the patient who has just left us is but in the infancy of his disease. If it be true, as we are told, that the average duration of the anesthetic form is from fourteen to twenty years, he must then have survived but one-fourth or one-fifth of his pathological term. I am the more inclined to this opinion, because we have seen that he is yet in the period of efflorescence of the malady, if we may use such a term in this connection. We found a single bleb upon his hand, but this will very probably be succeeded by others, each to be followed by that singular and interesting sequence of events we have just been studying.*

Per contra: I may say that it is probable our patient would have been in a far worse condition if he had been continuously exposed to the influences in the midst of which we may suppose his disease was engendered. Doubtless, during his long

* In an examination of this patient, made two days after the date of this lecture, I discovered two new filbert-sized bullæ on the palm of the right hand, in all respects resembling that described above. One pea-sized bleb had also developed on the lateral surface of the middle finger, but was of a reddish-purple color, and contained a reddish serum.

periods of residence in Honolulu, he was subjected to those unknown causes which have there made leprosy endemic. It is true that isolated cases of indigenous disease have been reported in this country; but in the present instance the antecedents of the patient seem to justify us in assuming that the remote causes of the malady operated during a foreign residence. For many years, however, the patient has been living in his native land. Professors Boeck and Holmboe, who studied the disease in this latitude, believed that the Scandinavian lepers in the Northwest, if not benefited by immigration to our shores, would at least have been in a worse condition had they remained at home. Such also is the opinion of my friend, Dr. Grönvold, of Minnesota, who has kindly furnished me with notes of his leprosy patients in that state. So far as I am aware, no leper in the United States has ever transmitted by heredity his disease to his offspring.

From every other point of view, the prognosis in the case of our patient is sufficiently unfavorable. He will almost certainly, at some time in the future, lose several phalanges of the feet or hands, or suffer from one of those deep and painful plantar lesions, which lay bare a tarsal bone, and gradually convert the foot into an inert mass of putrid shreds. The grave final result is usually from exhaustion.

With such a prognosis, you will not be prepared to hear that treatment can accomplish much. Needless to say that mercury, iodine, quinia, arsenic, and a long list of other remedies, have utterly failed to eradicate the disease. A careful study of the results said to have been obtained by the use of Gurjun oil, employed in the Beauperthuy method by Dougall,* and of the oil of cashew-nut by De Valencé,† will lead to the conviction that the benefit was largely due to the improved hygienic condition of the patients submitted to experiment. Where we are ignorant, it is best to admit the fact; for we thus show that we have at least learned the alphabet of wisdom.

* Medical Times and Gazette, June 20, 1874.

† Paper by Dr. Gavin Milroy, Medical Times and Gazette, May 30, 1874.

The best treatment for the leper is that which is founded upon the laws of hygiene and general therapeutics. Good air, nutritious food, bathing, a selection of suitable climate, tonics, measures for the relief of pain or other untoward symptoms, and antiseptics when indicated, constitute the sum total of our resources. We may well doubt, in view of the profound alterations in the nervous trunks, whether an agent will ever be found capable of repairing such extensive damage.

I can not conclude without expressing my conviction, that there is a pressing need, not only in Chicago but in many other of our larger cities, of a Hospital for Incurables. In some such asylum, properly managed, our patient might pass at least a portion of his future life in comparative comfort.

CHICAGO, ILL.

A CONSIDERATION OF THE ALLEGED ANTAGONISM OF OPIUM AND BELLADONNA.*

BY W. B. DAVIS, M. A., M. D.

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Occasional references are found in medical literature, as far back as 1570, to opium and belladonna, being counter poisons in their influence on the system. The belief in their antagonism arose largely from their action on the eye. It was known that opium would contract the pupil, and belladonna would dilate it; and from this it was inferred that their antagonism might extend to other parts of the system. The records of their use as mutual antagonists are meager and imperfect, and it was not until 1854 that we have any reliable data given us. Then Dr. Thomas Anderson, of Scotland, reported his observations of the action of belladonna in two cases of opium poisoning. Four years later Dr. Benjamin Bell, of Edinburgh,

* A paper read before the Cincinnati Medical Society, January 21, 1879.

reported "beneficial results," in a case of belladonna poisoning, from the hypodermic use of a solution of morphia. These cases, however, scarcely caused a ripple in the profession; and it was not until the year 1862, when Dr. William F. Norris, of Philadelphia, published his paper describing nine cases of opium poisoning, treated with belladonna, and eighteen cases of belladonna poisoning treated with opium, that any general interest was manifested in the subject. Since then many cases have been reported, where it is alleged that one or the other of these drugs has been successfully used as a counter poison, and the profession has about accepted this accumulated evidence as conclusive of their mutual antagonism.

There were those, however, who believed that the evidence adduced was not sufficient to justify such a conclusion, and, in justification of their skepticism, called attention to the well known facts, namely, that very large doses of belladonna are tolerated by children; that in many cases where poisonous symptoms have shown themselves in adults, from opium as well as belladonna, recovery has occurred without any special medication; that in many cases of poisoning where these agents have been used as antagonists, other treatment had also been resorted to; that failures as well as successes had been reported, etc.

Of late years the advance made in the knowledge of the physiological action of medicines, has thrown a great deal of light upon the action of these two agents in the system, and made clear to us *wherein* and *how far* they antagonize each other, and *wherein* they *agree* and *intensify* the action of each other. Let us consider for a moment the physiological action of these drugs.

Physiological Action of Opium.—The primary effect of a small dose of opium is stimulant; in large doses it depresses the heart's action, renders the circulation slow and full, and dilates the arterioles and veins. It retards respiration and renders it slow and feeble. It contracts the pupil, produces dryness of the throat, and proves narcotic, anodyne and anti-

spasmodic. In toxic doses, the above symptoms are intensified and the face becomes cyanosed, and there is profound coma. Death occurs in most cases from failure of the respiration, due, according to the observations of H. C. Wood, to a direct action of the poison upon the respiratory centers of the medulla. The morbid appearances after death are usually a livid hue of the surface, congestion of the brain and spinal column, with serious effusion and congestion of the lungs.

Physiological Action of Belladonna.—The primary effect of a small dose of belladonna is somewhat sedative to the circulation; in large doses its secondary effects follow in a few minutes, and are characterized by a marked acceleration of the circulation and respiration, increase of the temperature, rise of blood pressure, with contraction of the arterioles. The acceleration of the respiratory movements do not correspond with the increase of the heart's action. In toxic doses the above symptoms are intensified, and there is a state of "excitation." This, however, soon diminishes, the blood pressure falls, the circulation becomes weak, the capillaries dilate, and it acts as "a direct depressant poison on the heart and respiration, paralyzing this portion of the peripheral pneumogastric nerve, which is connected with the function of respiration." (H. C. Wood.) It dilates the pupil, produces dryness of the throat, and causes a restless, talkative delirium. Death is preceded by marked failure of the respiratory forces and the heart's action.

Let us now very briefly enumerate the points of antagonism, and the points of agreement, between these two agents.

Points of Antagonism.

1. Opium contracts, belladonna dilates the pupils.
2. Opium constipates, belladonna relaxes the bowels.
3. Opium* retards the circulation and respiration; belladonna, *in moderate doses*, accelerates them.

* Koenig, in Schmidt's Jahrbuch, says:—"Because a *small dose* of the one may be counteracted by the other, it is not proven that the effects of a fatal dose will also be rendered harmless."

4. Opium dilates the veins and arterioles; belladonna, *in moderate doses*, contracts them.

5. Opium induces profound sleep and coma, with low blood pressure; belladonna produces wakefulness and a talkative delirium, with high blood pressure, followed by convulsions and stupor.

Points of Agreement.

1. Both drugs produce dryness of the mouth and throat.

2. Both drugs, *in large doses*, retard the circulation and respiration, and dilate the arterioles.

3. Both drugs destroy life in the same way, namely, by a direct depressant action upon the respiratory centers and upon the heart.

If the above summary is a correct presentation of the physiological action of these drugs, we can see wherein and how far their use as counter poisons may be beneficial or injurious. Death occurs, in opium poisoning, from failure of the respiration; with a failing respiration, we have a languid circulation, a congestion of the veins and arterioles, and the blood saturated with carbonic acid. Belladonna, *in moderate doses*, will stimulate the respiration and circulation, and induce contraction of the veins and arterioles. *This is the limit of its usefulness in opium poisoning.* It simply keeps the vital machinery in motion—unless too large a quantity has been ingested—whilst nature eliminates the poison. The smallest amount which will increase the respiratory forces and stimulate the failing heart, should be used. Pushed too far, or given in too large an amount, it paralyzes the nerve trunk and increases the danger.

H. C. Wood says:—"A cardinal principle should, therefore, be to give no more of the mydriatic than is absolutely necessary. One-sixtieth to one-fortieth of a grain of atropia may be injected every fifteen, twenty or thirty minutes, as the urgency of the symptoms may demand. If the respirations had risen from four to eight per minute, I would not use the atropia again until there was a tendency for the respirations to grow less frequent."

Bartholow says:—"Not more than $\frac{1}{120}$ of a grain of atropia should be administered at a dose, and this may be repeated every fifteen minutes (up to three doses), until dilatation of the pupil, increased power of cardiac movements, deeper respiration, warmth and dryness of the skin, and flushing of the face, are produced. No more can be accomplished by the largest doses, and the results of the antagonism must be awaited."

Dr. John Harley says:—"One-ninety-sixth of a grain of atropia may be given, at intervals of two hours, to stimulate the failing power of the heart."

Dr. Johnson, of Shanghai, China, reports having treated three hundred cases of opium poisoning with atropia. In extreme cases "he injects half a grain of atropia. . . . It within two hours the dose fail to produce the desired effect, he repeats the injection."

Fothergill, in his "Antagonism of Therapeutic Agents," says, in opium poisoning, after emptying the stomach, "inject a fourth or a third of a grain of atropia before the respiration is gravely affected; then put the patient to bed, and carefully note the respiration, the pulse, and the temperature. If the respiration was still falling half an hour after the administration of the atropia, to inject another third of a grain, and still take careful notes; and give a third of a grain, or even more, if the respiration still fell. . . . With some patients it takes one-twenty-fifth of a grain of atropia to produce the effect readily attained with one-seventy-fifth of a grain in others. This susceptibility to a tolerance of belladonna must ever remain a disturbing factor in the treatment of every case of opium poisoning. . . . If the patient were at the point of death, the most timid need not fear to give a half a grain of atropia at once, and follow it by a second, if at the end of an hour marked improvement had not set in. . . . Every case of opium poisoning for the future should be regarded as an experiment to be carefully observed."

Fothergill and Johnson, in their heroic doses, do not seem to think there is any possibility of substituting belladonna for

opium poisoning, nor of intensifying the chief danger in opium poisoning, viz., depression of the respiratory forces. Fothergill quotes very freely from H. C. Wood, but does not observe his caution in the use of atropia. I think that it will be safer to follow the dosage and the precautions of Harley and our American authorities, than those of this eminent English writer.

Death occurs, in belladonna poisoning, from failure of the heart's action and of the respiratory forces. As opium acts in the same way in destroying life, we can not see any ground upon which its use in belladonna poisoning can be justified.

J. Hughes Bennett's experiments upon animals corroborate this position. In his "Report on the Antagonisms of Medicines," he gives a table showing the influence of morphia on large doses of sulphate of atropia in rabbits. The morphia was given from two to five minutes after the atropia. The number of rabbits experimented upon, *ten*; number of deaths, *eight*. He says:—"It does not appear, from this table, that morphia favors recovery after a large dose of sulphate of atropia. In several cases, the time of death seemed to be rather hastened than delayed. . . . In man, sulphate of atropia would be too dangerous and uncertain a remedy to depend on in cases of poisoning by opium."

Koenig (Schmidt's Jahrbuch, No. 149) reports a series of experiments on rabbits with opium and belladonna, and concludes from them that "morphia can not be regarded as antidotal to toxic doses of atropia."

John Harley, in "Old Vegetable Neurotics," says:—"Belladonna can not, in any sense, be regarded as an antidote against opium, but in large doses the exact reverse."

The conclusions of J. Hughes Bennett's report to the British Medical Association, concerning the antagonism of opium and belladonna, were as follows:

1. Sulphate of atropia is physiologically antagonistic to meconate of morphia within a limited area.
2. Meconate of morphia does not act beneficially after a large dose of sulphate of atropia; for in those cases the ten-

dency to death is greater than if a large dose of either substance had been given alone.

3. Meconate of morphia is not specifically antagonistic to the action of sulphate of atropia on the vaso-inhibitory nerves of the heart.

4. The beneficial action of sulphate of atropia, after the administration of large doses of meconate of morphia, is probably due to the action sulphate of atropia exercises on the blood-vessels. It causes contraction of these, and thus reduces the risk of death from cerebral or spinal congestion, as is known to occur after the introduction of fatal doses of meconate of morphia. It may also assist, up to a certain point, not precisely fixed in these experiments, by stimulating the action of the heart through the sympathetic, and obviating the tendency to death from deficient respiration observed after large doses of morphia.

Among the authorities consulted in the preparation of this paper, the following do not regard opium and belladonna as mutually antagonistic, but hold that belladonna is or may be beneficial to a limited degree in opium poisoning, but only so far as it stimulates the heart's action and the respiratory forces:

George B. Wood, M. D., *Therapeutics and Pharmacology*.

H. C. Wood, M. D., *Therapeutics and Materia Medica*.

John Harley, M. D., *Old Vegetable Neurotics*.

J. Hughes Bennett, M. D., *Antagonism of Medicines*.

Roberts Bartholow, M. D., *Materia Medica and Therapeutics*.

Sidney Ringer, M. D., *Handbook of Therapeutics*.

E. J. Waring, M. D., *Practical Therapeutics*.

Ignatz Jac Koenig, M. D., *Schmidt's Jahrbuch*.

Brown Séquard, M. D.

The following authorities hold that opium and belladonna are mutually antagonistic:

Alfred Stillé, M. D., *Therapeutics and Materia Medica*.

W. F. Norris, M. D., *Amer. Jour. of Med. Sciences*, 1862.

J. M. Fothergill, M. D., *Antagonism of Therapeutic Agents*.

C. Binz, M. D., *Elements of Therapeutics*.

Dr. Johnson, of Shanghai, China.

A CASE OF RHEUMATISM.*

COMPLICATED BY ENDOPERICARDITIS, DOUBLE PNEUMONIA,
PERITONITIS, AND TYPHOID SYMPTOMS—RECOVERY.

BY WILLIAM CARSON, M. D.

Charles Moore, in the service of Dr. William Carson, was admitted March 6, 1878; aged seventeen years, single, clerk, born in the city.

Family history.—His father and mother both died of phthisis; has always been healthy until last winter, when he commenced coughing, and he states he has been coughing more or less ever since. Five days ago (about the first of March) he commenced to suffer from pain in his head, and soreness of the limbs. His ankles were swollen and tender. He also complained of intense pain in the abdomen and chest, accompanied by dyspnea and a smothering feeling in his chest; expectorated a glairy, tenacious mucus. He also complained of fever and intense thirst, previous to his admission into the house.

Present condition.—A fairly nourished boy, medium height, dark brown hair, brown eyes; appetite fair, tongue coated, bowels regular.

Physical examination.—Increased area of cardiac dullness; heart displaced toward the median line. On auscultation, a moist, creaking sound is heard with both sounds of the heart toward the base; an endocardial murmur with the first sound, is also heard at the apex. Ordered one-fourth of a grain of sulphate of morphia every three hours, with turpentine stupes to the abdomen, and ice to the precordial region.

March 7. Pulse 104, respiration 36, temperature 100.4°; abdomen tender and tympanitic, and breathing principally abdominal. Morphia continued.

March 8.—Morning, pulse 92, resp. 32, temp. 98°; eve-

* Recorded by E. Walker, Interne in the Cincinnati Hospital.

ning, pulse 96, resp. 48, temp. $99\frac{1}{2}^{\circ}$. Condition about the same.

March 9. Suffers considerably from dyspnea; abdomen rigid, tympanitic, and very tender to the touch; pulse 92, resp. 56, temp. 102° .

March 10. Morning, pulse 120, resp. 32, temp. 102° ; evening, pulse 132, resp. 30, temp. 103° . Surface temperature, 98° on both sides of the face. Ordered twenty grains of sulphate of quinia every three hours, together with one-fourth of a grain of sulphate of morphia.

March 11. Morning, pulse 122, resp. 28; temp. $101\frac{1}{2}^{\circ}$; evening, pulse 106, resp. 32, temp. 102° . The area of cardiac pulsation extends from the second right intercostal space along the line of the sternum to the sixth intercostal space of right side. It also extends two inches externally to the nipple on the left side. On palpation, a thrill is felt; the abdomen is more relaxed than it was yesterday. Dullness on percussion all over the left lower lobe, anteriorly, posteriorly, and in the axillary line. At the base of the right lung there is also dullness on percussion, but not so extensive as in the left lower lobe. The percussion note at the right apex in front is more resonant, and less resistant than at the left apex. Bronchial breathing is heard at the base of both lungs posteriorly. At the apices, moist râles on inspiration; there is a well-marked systolic bruit in the second intercostal space of the left side.

March 12. Morning, pulse 102, resp. 36, temp. 102° ; evening, pulse 104, resp. 39, temp. $102\frac{1}{2}^{\circ}$. The patient states that the pain in his abdomen is intense; has not had a stool for three days; ordered an injection of soap and water; had two stools soon after, and the pain seemed to be much lessened. Morphia still continued.

March 13. Morning, pulse 80, resp. 36, temp. $98\frac{1}{2}^{\circ}$; evening, pulse 84, resp. 40, temp. 99° . Abdominal pain not quite so great; abdomen still rigid and tympanitic.

March 14. Morning, pulse 81, resp. 37, temp. 98° ; evening, pulse 87, resp. 41, temp. $101\frac{1}{2}^{\circ}$. Dullness less marked at the base of the left lung. Bronchial breathing more mark

ed at the base of the right lung than at the base of the left. Breathing much hastened by being turned over in bed for an examination.

March 15. Morning, pulse 96, resp. 40, temp. 100° ; evening, pulse 99, resp. 43, temp. $101\frac{1}{4}^{\circ}$. Pulse full; cardiac dullness not so great as yesterday; skin hot and dry; tongue coated with a thick, white, moist coating; papillæ are prominent and edges indented; some epistaxis; slight diarrhea.

March 16. Morning, pulse 100, resp. 47, temp. $99\frac{1}{4}^{\circ}$; evening, pulse 112, resp. 48, temp. $100\frac{1}{2}^{\circ}$. Had seven stools last night, small in quantity, ochre-colored; epistaxis still continued; abdomen not quite so painful.

March 17. Morning, pulse 112, resp. 47, temp. $99\frac{1}{2}^{\circ}$; evening, pulse 110, resp. 31, temp. 100° . Diarrhea still continues; abdomen still painful; complains of coughing a great deal.

March 18. Morning, pulse 98, resp. 49, temp. 100° ; evening, pulse 101, resp. 48, temp. $99\frac{1}{2}^{\circ}$. In the second intercostal space of the right side, the endocardial murmur can just be heard. The bruit at the apex with the systole is still distinct. A peculiar crepitant sound is heard at the apex of the heart; it is heard most distinctly on full inspiration, and sounds as if it were produced by the apex of the heart striking against a congested lung or a false membrane.

March 19. Morning, pulse 89, resp. 34, temp. $98\frac{3}{4}^{\circ}$; evening, pulse 109, resp. 40, temp. 99° . Slept well, and says his pain is not so severe; had five stools last night.

March 20. Morning, pulse 102, resp. 36, temp. $98\frac{1}{2}^{\circ}$; evening, pulse 105, resp. 39, temp. 100° . Complains of pain across the chest below the nipple; had seven stools last night. Sudamina all over the chest. The action of the heart is intermittent. The pulse is dicrotic. Marked pain in the right iliac region, running up to a line drawn through the umbilicus. Ordered ice to the chest, ten drops of oil of turpentine every two hours, quinia still continued, and whisky. Bowels still loose, stools ochre colored, thin, but not watery.

March 21. Morning, resp. 38, temp. $98\frac{1}{2}^{\circ}$; evening, resp.

32, temp. $99\frac{3}{4}^{\circ}$. Bowels are controlled; only had one stool last night, and that was moulded. The patient feels much better.

March 22. Morning, pulse 84, resp. 27, temp. $98\frac{3}{4}^{\circ}$; evening, pulse 99, resp. 29, temp. $99\frac{1}{2}^{\circ}$. Pain in the side has gone; endocardial murmur less distinct; patient feels better than he has since he came into the house; tongue clean and smooth; bowels more regular; pulse no longer dicrotic, and heart's action regular.

March 23. Morning, pulse 81, resp. 34, temp. $98\frac{1}{2}^{\circ}$; evening, pulse 79, resp. 37, temp. $98\frac{1}{2}^{\circ}$. Patient complains of pain in the left side of his chest; had four stools, small in quantity and fluid, last night. Ordered turpentine stupe to the left side of the chest; pain soon relieved; whisky and quinia continued.

March 24. Morning, pulse 80, resp. 31, temp. normal; evening, pulse 83, resp. 29, temp. normal. Patient feels better; complains only of coughing; pain in the left side of the chest all gone; no endocardial murmur heard; pulse regular, no longer dicrotic.

March 25. Crepitant râle heard in the right axillary region; dullness has disappeared from the base of left lung; bronchial breathing still marked at the base of the right lung.

March 27. Morning, pulse 81, resp. 22, temp. normal; evening, pulse 82, resp. 24, temp. normal. Patient feels better; complains of nothing but bad cough; abdomen loose, and no pain in it.

March 29. Morning, pulse 82, resp. 21, temp. normal; evening, pulse 85, resp. 19, temp. normal. Slept well; sat up for a short time to-day; bowels regular.

March 31. Morning, pulse 80, resp. 20, temp. normal; evening, pulse 81, resp. 21, temp. normal. Feels better in every respect; sleeps well; much stronger; expectorates tenacious mucus; bowels regular.

April 1. Feels stronger; endocardial murmur has disappeared; no dullness anywhere; no cough or pain; is rapidly convalescing; pulse, respiration and temperature normal.

April 3. Slight cough; bowels regular; no pain; pulse, respiration and temperature normal.

April 4. While not watched by the nurse he eat some pudding, which started his diarrhea again. Ordered bismuth and opium; pulse and respiration normal, temp. 100°.

April 7. Diarrhea checked; pulse, temperature and respiration normal.

April 10. Improving every day in every respect.

We have been prompted to report the above case, partly because of its recovery in the presence of formidable lesions, and also because of probable varieties of interpretation of its phenomena. We believe that the antipyretic and antiseptic influence of the large amount of quinia administered may be credited largely with the general control of the case. The morphia also seemed to have a good influence. The local application of ice at the precordial region was the means of giving great relief to the distress produced by the pericarditis.

That there were septic influences at work in the case will not be denied. The precise origin of them may be a disputed point. We have in our heading called it "septic endocarditis," because it would not imply what the recovery prevented the proof of—that it was "ulcerative endocarditis," the term which is usually applied by the latest construction of such cases, and a disease which is stated to be almost universally fatal. The term "septic" used here, is intended to imply a condition of "blood-poisoning," without the destructive processes of "ulcerative endocarditis." The case would come, however, under the head of the typhoid form of this latter, as it is described by our more recent writers.

Dr. Kirke, whose connection with the development of this subject is well known, says, in a comment on a case reported by him in the *British Medical Journal*, 1863, and which was the subject of serious thought and discussion by eminent physicians of London who saw it, that "the association in question is by no means generally recognized, and when a case of the kind occurs, it is apt to perplex and mislead even the most

practiced observers." We believe this statement has some force with reference to the practice of the present period also.

The pathological grouping in our case, up to the time when the pneumonia and the endopericarditis were the special features, is such as is known to be presented in a certain proportion of cases of acute rheumatism, and which is attributed to the general morbid cause in action. The time of appearance of the peritonitis, general typhoid depression and sordes on the teeth, the diarrhea with ochre-colored stools, and the epistaxis, was the time when possible septic products, of local origin in the inflamed endocardium and valves, extended the infection. This would be one view, and is the one commonly stated in articles on "ulcerative endocarditis." It points out two periods of distinct character in certain cases of rheumatic disease; the first comprising the course of the case, marked by ordinary articular affections, and more or less apparently inflammatory fever and endocarditis; and the second beginning with supposed infection of local origin in the inflamed heart, and running such a course as to obscure, if not entirely conceal, the primary features of the case. It is the difficulty of correctly interpreting such a case, when seen in its later stages, to which Kirke alludes.

Another view might be that the original cause, that which initiated the ordinary rheumatic symptoms, is sufficient for all the varieties which appear in direct connection with them. This view would imply that rheumatism is more or less septic from the beginning.

Without further speculation as to how these varieties of rheumatic disease are produced, or as to their pathology, it is of practical importance to recognize the fact of blood-poisoning. When we refer to the most reliable remedies, one of which was used in this case in very large quantities, we find they are such as are known to be positively antiseptic. Quinia was used here to the extent of probably securing its full antiseptic influence: the quantity was also sufficient for antipyretic effects.

ON THE RECOGNITION AND TREATMENT OF INFLAMMATION OF THE MIDDLE EAR IN SCARLATINA.

BY CHARLES W. MILES, M. D.

Observation has convinced me that the question of aural complications in scarlatina, as well as in certain other exanthematous diseases, amounts to practically nothing with a large number of general practitioners; and the ignoring of this complication may be expected when we consider the little importance attached to it by our text-books and teachers of medicine, if we are to judge by their silence on the subject.

Of five different works on the practice of medicine now before me, four mention the bare possibility of such a complication, without a word as to treatment; while the fifth speaks of external otitis (?), and offers, as the only treatment, the cleansing of the ears with warm water and soap, or, if that fails, a mild astringent injection. We are so constantly and forcibly warned against nephritis as the great and important complication to be avoided, that we almost invariably become blinded to all else.

It is equally as important that the ears should receive a daily examination during an attack of scarlatina, as that the urine should be examined for casts and albumen; and I feel quite sure that I will be borne out in this opinion by every one who has investigated the causes of deaf-mutism.

During the past two years I have treated three cases, which illustrate very happily the good results to be obtained by an early and judicious treatment of this disease. In reporting these cases, it will answer my purpose to omit such portions as relate to the scarlatina proper, since they present nothing unusual, and confine myself exclusively to the history and treatment of the aural complications.

CASE I. Willie P., aged eight years, was attacked with scarlatina in August, 1877. On the 18th of August I found him suffering with all the symptoms of an acute catarrhal inflam-

mation of the middle ear, which had supervened during the previous night. Laudanum had been poured into the ear pretty freely, under the idea that the child had "neuralgia of the ear," but no relief had been obtained.

Examination reveals hearing distance of right ear $\frac{6}{48}$; otoscope shows a pinkish-colored drum-membrane, with blood-vessels quite distinct; pressure on the tragus causes considerable pain; tuning-fork, when placed upon the head, is heard most distinctly in the right ear; left ear normal.

Treatment consisted in the instillation of hot water continuously until relief of pain, and afterward repeated every half hour, and continued for five minutes at each sitting. A saturated solution of chlorate of potash was directed for the throat. After the subsidence of the more acute symptoms, the middle ear was inflated daily by means of the Eustachian catheter. Under this plan of treatment recovery was complete.

CASE II. I was called in May, 1878, to see Frank W., aged five years, who was convalescing from an attack of scarlatina; found him with a severe earache affecting both ears; hearing distance of the right ear a nullity, but the tuning-fork is heard very distinctly when in contact with the right side of the head; drum-membrane infected and bulging; the left ear is in about the same condition as the right. Diagnosis:—acute suppuration of the middle ear.

Paracentesis of both drum-membranes was done through Shrapnell's membrane, which was followed by a considerable discharge of pus, and immediate relief of pain. The after-treatment consisted in cleansing the ears daily by means of warm water injections, followed by Politzer's method of inflation, and the instillation of nitrate of silver, two hundred and fifty grains to the ounce of water. In this case recovery followed, with hearing distance of right ear $\frac{30}{48}$, left ear $\frac{24}{48}$.

CASE III presents nothing materially different from Case II, and need not be recorded here.

In contrast with these cases, I need but refer the reader to individuals, to be found in every community, who have suffered from childhood with all the evils attendant upon a chronic

suppurative inflammation of the middle ear, or with a still more unfortunate condition of total and irremediable deafness.

As regards the treatment in cases of acute catarrhal inflammation, the abstraction of blood from the tragus, by means of leeches, probably yields better results than any other antiphlogistic means. But on account of the difficulty of obtaining leeches in a country practice, I have been in the habit of using hot water as a substitute, and the results have so far exceeded my expectations, that I am inclined to regard it as a curative measure but little, if at all, inferior to the abstraction of blood. To obtain the best results from this plan of treatment, the applications should be frequent and long continued, and as warm as can be comfortably borne.

I need hardly mention the importance of paying prompt attention to the throat trouble.

Should the disease progress to the stage of acute suppuration, as sometimes occurs despite our best efforts to the contrary, an early recognition of the change is of the greatest importance, as the good or bad result is often dependent upon an early paracentesis should the ordinary remedies prove of no avail. Should a perforation of the membrana tympani occur, together with other measures of relief I am in the habit of using nitrate of silver in solutions of from two hundred and fifty to five hundred grains to the ounce. With solutions of this strength, one or two applications will generally accomplish the desired result. It is far preferable to the slower method entailed by the use of solutions of twenty and forty grains to the ounce.

In conclusion, I wish to refer briefly to the habit, with a great many practitioners, of attributing the earlier symptoms of catarrhal inflammation to "nervous otalgia," and to the habit of pouring into the ears of their patients that most abominable of all bad remedies—laudanum and glycerine. And I refer to it more especially that I may impress the folly of such mistakes, by quoting one or two authorities on the infrequency of true otalgia. Roosa admits having met with but one such case in fifteen hundred. Dr. Kramer says:—

“I have never observed earache without evidences of inflammation, either of the meatus or of the membrana tympani.” Wilde makes use of the following:—“Although I am not prepared to go to the length of saying that such an affection does not occasionally exist, I must say that I can not tax my memory with more than one or two instances of so-called ‘nervous otalgia,’ for which I have been consulted, that, upon a careful examination, I could not discover some direct visible cause for it.”

JORDAN, KY.

WAS IT DENGUE?

BY T. J. REID, M. D.

On March 12th, 1878, I was called to see Miss F., aged twenty-four years. Her present sickness began with anorexia, lassitude, drowsiness and general debility, resulting in a light fever of a remittent character, accompanied with nausea and vomiting, severe frontal headache, and great muscular soreness, and pains in the large and small joints, tongue somewhat swollen, swelling of the face and eyelids, considerable thirst and great prostration. Pulse 90 to 100 per minute. There was also numbness of the extremities and other parts of the body, with a pricking sensation. The tumefaction of the face would disappear and then return in a day or two, without any pain, redness or itching. These symptoms continued more or less for several weeks, during which time she had a second relapse. She could walk only with the greatest difficulty. She regained her strength slowly, the disease having left her much prostrated, with edema of the feet and legs, but she recovered entirely within six weeks.

Four days after Miss F.'s attack, Mrs. B., aged twenty-four years, mother of two children, was seized with the same disease. Her general appearance previously, indicated excellent

health. The symptoms were very similar to the former case, but more severe. There was more nausea, with vomiting of bilious matter. She also had an attack of syncope, and was troubled with urticaria. The fever was mild, and the pulse reached 110 on one or two days.

This condition lasted for two weeks, with intercurrent remissions, and feeling much better she arose from bed with the expectation of resuming her household duties, but was suddenly seized with most intense pain in both hips, legs and feet, which was only relieved by anesthesia. This pain continued two or three days, when it subsided everywhere except in the left foot and leg, which were cold and edematous, with a pricking sensation, and soon discoloration over the instep and underneath the toes appeared, resulting in well-marked dry gangrene. There was some fetor, and the limb was less painful when hanging down. The line of demarcation was formed at the metatarso-phalangeal articulation; the gangrenous spot on the instep was about the size of a silver dollar.

There could be detected no pulse in the leg, not even in the femoral artery; and as the constitutional symptoms of gangrene were becoming marked, Dr. Roane and I decided that the limb ought to be amputated. Dr. W. E. Rogers, of Memphis, was called and operated at the junction of the middle with the upper third of the leg. There was no hemorrhage from the main artery, and only one or two small arteries were ligated. Examination showed the blood-vessels to be in a healthy state. The patient bore the operation well, and made a good recovery.

This lady's suffering was agonizing for forty-one days, except when under the influence of powerful anodynes. She took eight and a half ounces of chloroform, beside a great deal of morphia and McMunn's elixir.

Three or four days after Mrs. B.'s attack, her husband, a young man of robust health, was taken with a chill, and in the progress of the case symptoms identical with the other two cases were developed. In the palms of his hands were some red colored blotches resembling purpura. It was about

three weeks before he recovered, and was disappointed twice by spurious convalescence, and had to return to bed.

Here were three young persons who, from childhood, had enjoyed unusual health, occupying high social positions, and rather Epicurean in their mode of life, living in the country in the same house, taken sick within the same week with symptoms so similar, that it must have been the same disease in all. Mrs. B. had two children, one two years and the other five years old, also an old gentleman lived with them who was a great sufferer from gout—all three escaped the disease. I understood two servants on the place were similarly affected, but did not see them.

What was the disease? Dr. Paul Otey, of Memphis, who saw Mrs. B., thought it toxic effect of malaria; but occurring at a season of the year when malaria prevailed to a limited extent, and quinia failing to control it, this could not be accepted as the *materies morbi*. Dr. Roane suggested some mineral poison, but after diligent search no local cause could be found.

The rheumatic pains, tumefaction of the face, tendency to relapse and tardiness of recovery, stiffness in the gait, numbness and edema of the extremities, the syncope and urticaria, correspond more to the symptoms of dengue than any other malady. Two important symptoms are wanting to confirm the diagnosis. The disease is said to prevail as an epidemic,* and is accompanied by an eruption. Here there were no other cases in the neighborhood, nor was there any eruption, except the urticaria in one case and the red spots in the palm of the hand in another.

As there is much obscurity about these cases, I have given a description of them to the readers of the American Practitioner, with the hope that some one may throw more light on the subject.

* Loomis says sporadic cases may occur.—ED.

TREATMENT OF A CASE OF ASPHYXIA NEONITI.

BY C. M. RAMSDELL, M. D.

Mrs. H. summoned me to attend her in labor at about the beginning of the seventh month of pregnancy. The patient was a German, quite small, the mother of several children born at full term. She had been having pains at intervals of half an hour for eighteen hours, and had taken morphia on her own responsibility to stop the labor.

On making a digital examination, I diagnosed breech presentation, second position. Auscultation failed to reveal the fetal heart sounds; and when the lower half of the body was delivered, I could not feel any pulsation in the umbilical cord. The head was soon delivered, and I found the face nearly black, and the whole surface, especially the extremities, of a dark purple hue.

A few drops of blood flowed on severing the cord, and on removing the child a faint fluttering could be detected over the heart. Hot and cold water were applied alternately to the child, swinging by the arms as recommended by Cazeaux, and other means were used, but to no purpose. I then placed my mouth over the child's and forcibly inflated its lungs, afterward expelling the air by compressing the chest with my hands. A few efforts of this kind caused the heart to beat more forcibly, and it was remarkable to note how, after each inflation, the circulation seemed to receive a fresh impulse. In a few seconds again the heart beats would begin to grow slower and fainter, until another inflation. After nearly a half hour the inflation began to be followed by a feeble, gasping movement, the gasping growing stronger and more frequent, until in an hour and a half after birth the child began to breathe naturally. The congestion began to disappear with the first inflation, and by the time natural respiration was established, the cyanotic hue had given place to a rosy red, and the child soon went to sleep. The child lived, apparently,

doing well for fourteen days, and then died from what seemed to be an attack of malaria.

I report this case as one showing the power of resistance to asphyxia in the immature fetus, and the importance of long continued exertions in resuscitating the apparently still-born.

LAFAYETTE, IND.

SYPHILITIC FACIAL PARALYSIS.

BY G. KAISER, M. D.

CASE I. In July, 1877, I saw Mr. E., a merchant, who was suffering with severe headache, affecting the right side of the head principally, with an exacerbation at night. There was no pain in the occiput, but he suffered so much from dizziness that he could not walk or stand. The left side of his face was paralyzed, his speech was indistinct, and the intellect sluggish. He had rheumatismoid pains in the left arm, extending to all the fingers of the hand, also large gummata were found on the back of his neck, and a few small gummy ulcers on his scalp. From a relative of the patient, I learned that he had been afflicted with headache for over a year, and six weeks since paralysis of the face ensued.

This history and these symptoms led to the diagnosis of tertiary syphilis, with probably gummy deposits within the cranium, on the right side. He had been under treatment before I saw him, and had taken bromide of potassium, hydrate of chloral, strychnia, and had leeches applied over the temporal region, and ice to the head.

The patient acknowledged having contracted syphilis when a soldier in the late war, and was discharged cured after six weeks' treatment, since which time his health has been only moderate. He is now married and the father of four children, all of whom have a scrofulous diathesis, two of them having phlyctenular ophthalmia—the oldest, aged twelve, beside the ophthalmia has enuresis.

Under antisyphilitic treatment, combined with arsenic and tonics, Mr. E. made a satisfactory recovery, and now attends to his business.

CASE II. I was called, in May, 1877, to see Mr. A. J., a butcher. The patient had been suffering more than nine months with headache, the pain being very severe during the last three weeks. Recently paralysis of the left side of the face supervened, with symptoms similar to the first case, except the rheumatic pains. He also had a gummatous ulcer on his left arm. He acknowledged having contracted a chancre eight years ago. The chancre was cauterized, but left a large hard lump, which disappeared after several months. He also had syphiloderma and alopecia. He is married now, and has two children, one of whom has rachitis.

The patient was treated successfully with large doses of iodide of potassium, and with *beberis aquifolia*, combined with tonics and a stimulating diet.

Remarks.—While mercury, with the iodides, is the sheet-anchor in the treatment of syphilis, yet I have been gratified with the use of *beberis aquifolia*, and have seen better results in most cases where it has been added to the common antisyphilitic treatment.

We are indebted to Ricord for the present classification of syphilis into three divisions, which enables the practitioner to pursue a rational treatment which leads to greater success than in former times. Gummata occupy a position in the tertiary group, and may properly be called syphilitic indurations, or plastic tumors of the connective tissue, and may be found alone (single) or in groups. They are of variable size, ranging from a filbert to a hen's egg, and are somewhat common in the brain. Cazenave, in his *Traité des Syphilides*, mentions a patient who had fifty gummata.

From observation, I have concluded that tertiary syphilis is a fruitful source of scrofula; and these two cases aid in substantiating the theory. The prognosis in these cases should be reserved, but they are usually very amenable to treatment.

FOREIGN CORRESPONDENCE—OUR LONDON LETTER.

MY DEAR YANDELL: I regret to say that, through some defect in the usually excellent working of the postal arrangements, my letter could not reach you in time for the January number of "The Practitioner." I trust, however, that for the future nothing but shipwreck of the mail steamer will break the steady flow of my letters—unless, horrible thought, your readers may request you to fill your pages in some other manner, and with more interesting and instructive material. The high character of your journal makes a correspondent nervous as to how far he may be able to keep up to its high standard. I can but fail, after all; but I will do my best not to disgrace myself.

The societies have not been lively; and the weight of depression in trade seems to have pressed upon the medical mind, and made the communications not quite so interesting as usual. At the Medical Society, Dr. Arthur Leared read a paper on "Dyspepsia from Impaired Movements of the Stomach," in which he pointed out that dyspepsia may arise from defective activity of the muscular walls of the stomach, as well as from insufficient secretion of gastric juice. In this form of dyspepsia there is no emaciation; the food is digested slowly but effectually, and the appetite is unimpaired. Such dyspepsia, he states, is the most common form: there is no pain in the digestive act, but it is accompanied by discomfort and by flatulence. The absence of pain is a great diagnostic point. Where the movements of the stomach are impaired the food is not actively rolled over in the stomach, and so its disintegration and solution are not accomplished readily. In such form of dyspepsia there may be constipation, but at other times there is diarrhea from the undigested food being passed through the pyloric ring into the intestines, and thence outward: being undigested it is not suited for assimilative processes, and so is swept away swiftly, causing that form of diarrhea which is known as lenteria.

As to treatment, it consisted of course, in the first place, of suitable food; such food, indeed, as would not require much gastric movement for its digestion. The principal meals should be taken early in the day, he insisted, before the nervous system had been taxed by mental or bodily exertion. As to the medicinal agents to be prescribed, strychnia holds the first place. Although Chomel's condemnation of this agent has been indorsed by Brinton, whose work on "Diseases of the Stomach" is so well known; neverthe-

less, strychnia has held its place as a remedy for dyspepsia,—especially in that form where the muscular movements are imperfect. He objected to its administration in the form of pill, preferring it in solution, as liquor strychniæ for acid mixtures, and as the tincture of nux vomica where it was given along with alkaline mixtures. It will be found as a matter of fact that the addition of strychnia to the well known mixture of rhubarb and soda is very effective. The dose should be about the twentieth of a grain three times a day, and it is rarely necessary to exceed this. To check the fermentation which often accompanies this form of dyspepsia carbolic acid may be given, but Dr. Leared prefers thymol. He also advocated the use of charcoal, made from vegetable ivory, which absorbed the gas very readily. In a few cases it becomes necessary to pass a tube to allow of the escape of the gas.

The discussion which followed, of course, wandered from the point; and included reference to different forms of dyspepsia, including that form which is aggravated by fluids taken during the digestive act, and cured by the patient being restricted to a dry dietary: that form which is produced by bad teeth and imperfect mastication: that which is truly reflex, being due to uterine and still more to ovarian irritation,—being at times due to irritation elsewhere. As to the treatment of this reflex form, it is necessary to treat the source of the dyspepsia, the primitive irritation; and to give bromide of potassium to lessen the nerve conductivity, as well as to diet the patient.

Some little time ago, you gave an abstract of Mr. Spencer Wells's lectures on ovariectomy. There Mr. Wells said that he had only just commenced to perform ovariectomy by the antiseptic plan. Since then Mr. Thomas Keith, of Edinburgh, has published a pamphlet on "Ovariectomy before and after Antiseptics." At first when Mr. Keith tried the antiseptic plan, he sponged out the cavity with a solution of carbolic acid, washed his sponges therein carefully; antiseptic ligatures, first of silk and afterward of catgut, were used; and all instruments were smeared with carbolic acid oil. Towels were soaked in the fluid and held against the wound, in the hope of keeping the air pure as it rushed in when the peritoneal cavity was opened. The floor was sprinkled with the solution; the air of the room was charged with the vapor of carbolic acid. But all in vain; the results did not improve, but rather the reverse: this plan of operating brought nothing but disappointment and vexation of spirit, and was abandoned. Still belief in the virtue of the antiseptic plan

(if it could only be made practicable) survived. Extreme attention to cleanliness was next practiced; and no visitors or attendants were permitted to be present, who had, within a week, seen any case of infectious disease, or been in a dead house. This was all very well, but things did not improve: when cases went wrong, Mr. Keith had seldom to look far beyond himself for the cause of failure,—something done, something not done. This he found was a lesson very hard to learn. During the operation the abdominal cavity was very freely exposed, and there was no haste exercised in closing it; half an hour's waiting was time well spent. Every vessel was carefully tied: large lumps of cellular tissue were not tied, only the bleeding points. The clamp was gradually displaced by the cautery; and when ligatures were required to the pedicle, very fine soft iron wire or catgut was used—thick silk ligatures were never used. Then drainage, by a large perforated glass-tube, passing to the bottom of the pelvis, became the rule in severe operations. Finding that the red serum, that enemy of the ovariomist, was not always so got rid of nor deprived of its power, it was removed by the tube and a syringe every three or four hours. Once no less than one hundred and forty-six ounces of fluid and clots were got away,—a matter Mr. Keith thinks very important *then*, if not so important now, under antiseptics.

“Since 1876 every operation has been performed, with all Mr. Lister's care, under the carbolic acid cloud, and I shall never go back to the old method,” he writes. The operation may be simple, or it may take a long time and much care to attain good results. He found the mortality much lessened after leaving the old Edinburgh Infirmary and doing the operation in private houses. No results approaching those he then attained had hitherto been reached anywhere, whatever the advertisements of the Samaritan Hospital may say. Of nine deaths, five were probably hopeless under any condition. Mr. Keith says:—“I had not performed ovariotomy half a dozen times, when I felt sure that it would become, perhaps, the safest of all surgical operations.” For seven years there was no death from a non-adherent simple tumor, and a large proportion of the fatal cases were of a cancerous nature. In the other fatal cases, with one exception, the operations were extremely severe,—large adherent tumors in feeble women, who came late in the disease.

The first operations performed under the carbolic spray were not such as to strongly tempt Mr. Keith to return to antiseptics. Some Germans—as Olshausen, Esmarch, Hegar and Schroeder—brought

forward their experience, before and after the use of the spray: from one-half the mortality fell to one-fifth.

Without antiseptics, Mr. Keith's mortality was altogether one in seven; of the last five years only one in twenty-one. He attributes his success to, first, the use of the drainage-tube; second, to the use of the cautery in dividing the pedicle; third, the use of Koeberlé's compression forceps; and, fourth, to the substitution of ether for chloroform, by which the after-vomiting is avoided, and the risk of hemorrhage after the wound is closed avoided.

Now for the results of fifty operations, performed as carefully as possible under the spray. Two of the first eight died; the rest, forty-two in number, all recovered. Of these fifty cases, five were patients he would gladly have not seen till he had had more experience of the spray. To give details of them is impossible; it is sufficient to say that at first the spray was tested very severely. Sufficient time was not given; all oozing was not so well attended to as it ought to have been; the drainage-tube was abandoned to be adopted again. The evil consequences, in the shape of after-fever from absorption, were well shown in one case insufficiently sponged, though it pulled through ultimately. Many of the last series of cases were simple operations. "Instead of, as in former years, advising against operation in cases of moderate-sized tumors, which had not yet become a source of danger, all were operated on just as they came: hence the number of simpler operations. [This is, to my mind, a very significant observation.] The spray is neither troublesome nor inconvenient. The instrument at present in use is Gardner's largest size. It has a double jet, and when placed at a distance of eight or nine feet, the spray reaches the wound without any cooling current and as fine as a London fog. That the spray is essential in ovariectomy to the perfect carrying out of Mr. Lister's principle, is proved by my experience over so many years of the simple carbolic acid treatment. There can be no two opinions about that."

With antiseptics the intraperitoneal treatment of the pedicle will be found to answer best. The clamp has done good service, but it must give way to something better. Of fifty-two cautery cases before antiseptics, four died; of thirty-two cautery cases with spray, all recovered. The convalescence was easier in the antiseptic cases. They suffered less from flatus, and slept better. The nurses had less trouble, and so got more sleep.

After burst-cysts, the temperature rose to a great height (105.5°

and 106.2°) a few hours after the operation. Hyperpyrexia, after the operation, he attributes to the patient being overfed, or in too full health with small tumors, or to imperfect cleaning or imperfect drainage, giving rise to absorption-fever. Before antiseptics he let full women bleed to ten or twelve ounces. For long his practice was to wait till the patient had suffered from her burden and interference was necessary. (This bears on the mortality of primary and secondary operations: where the operation gives relief to the organism, the prognosis is much improved.)

What then have we gained, he asks, by antiseptics in ovariectomy? First, it has lessened mortality. Second, this increased safety will encourage medical men to recommend earlier operation. Third, with antiseptic ovariectomy, the drainage-tube will not be nearly so often required. Fourth, convalescence is rendered easier. Fifth, antiseptics are a great comfort and relief to the operator in many ways; and render many precautions, formerly most necessary, no longer necessary.

That drawbacks may yet appear is quite possible. One's pleasure in this operation is, he says, greatly marred by the frequency with which malignant disease is found at the operation, or shortly after it, upsetting all calculations. One-fourth of his deaths have been in malignant cases. Five patients left, the picture of health, to die in a short time of peritoneal cancer. Thanks to the researches of Dr. Foulis, followed by those of Mr. Knowsley Thornton, when free fluid is found in the peritoneum along with ovarian tumor, no operation is performed,—microscopic examination of the fluid demonstrating its nature.

Mr. Keith concludes:—"This long despised operation is now the safest of all the great surgical operations, at least judging from the results; twelve deaths of the last one hundred and fifty-eight, three of the last seventy-seven, and no death of the last forty-three operations."

(This paper was read at a meeting of the South-Eastern Branch of the British Medical Association, on October 10th, and is printed for private circulation. So any reader who desires to possess it must apply directly to Mr. Keith, whose courtesy to send back a copy may fairly be relied on; but I have no authority from him to say that he will do so.)

Mr. Teevan recently read a paper at a suburban meeting, on the "Importance of Early Recognition of Stone in the Bladder, and the

Means of Detecting It." A big stone means much disease and great risk; a small stone little disease and small risk. For the diagnosis of stone a group of symptoms will often create strong suspicion, where each taken singly is of little worth. They are, first, frequency of micturition; second, difficulty of micturition; third, pain; all indicative of other diseases as well as stone—where the second is found it is often accompanied by priapism in boys; fourth, blood. "The man whose kidney bleeds, passes bloody urine; whereas the patient with stone in his bladder passes urine and then blood." Fifth, altered condition of urine; sixth, retention of urine; seventh, prolapse of the rectum (common in boys); eighth, incontinence of urine (where the stone is impacted in the prostatic portion of the urethra).

Rough motion will tell of a stone, but will not aggravate a stricture. Pain and blood, both increased by exercise, are indicative. For the actual detection of stone certain sounds are required, such as were invented by M. Mercier, with a short beak and a sharp angle. They are not difficult to introduce. Then the beaks should be hollowed on each side, so as to present a concave surface to the convexity of the stone. Three bony points—the sacrum, the spine of the right ischium, and the spine of the left ischium—may be struck, and cause a wrong diagnosis to be made. The operation of sounding can not be conducted too slowly; and the process of "whipping" the sound out of the bladder can not be too strongly reprobated.

I have just been told an almost incredible story by the Doctor I am with down in Hampshire. His predecessor was once called in by a neighboring practitioner, who had pulled off, as he thought, a child's head with the forceps, and who could not find the body of the fetus. He found that the old boy had extracted a fibroid tumor; but nothing but cutting it open could convince him of his mistake.

A well known medical baronet, about whom some good stories are told, but who is not a universal favorite, was recently called to the country; and, on careful examination, found severe pericarditis which had not hitherto been noted. When the doctors retired for their private consultation, the consultee made profuse apologies for his diagnostic omission. The facetious baronet patted his junior on the back, and comforted him a Jobish manner by saying, "Perhaps it is just as well that you did not find it; because, you know, my dear fellow, *if you had you might have treated it.*"

Reviews.

Situsphantom der Organe der Brust und oberen Bauchgegend. Von ADOLF FERBER, Privatdocent und Assistent an der Medicinischen Klinik zu Marburg. Bonn, 1877.

Manual of Physical Diagnosis. By FRANCIS DELAFIELD, M. D., and CHARLES F. STILLMAN, M. D. New York: Wm. Wood and Co. 1878.

Both of these books are intended for use in physical diagnosis. The first deals almost entirely with some of the topographical relations of the thoracic and abdominal organs. It comprises a small pamphlet of explanations, and the "situsphantom" or superimposed plates, giving successive views from outwards within of the thoracic skeleton and the abdominal walls removed, so as to expose the liver, stomach and large intestine *in situ*. Successive views are given of the lungs and trachea, then the pericardium with heart contained, then the heart and vessels in position and pericardium removed.

The topographical details in the "Tent," which is separate from the "Phantom," begin with the pleura, in its several divisions of—first, pleura costalis; second, pleura diaphragmatica; third, pleura mediastinalis; fourth, pleura pulmonalis. Some considerable space is devoted to *Die Disponiblen Pleura-räume*, or reserve spaces in health and disease. The lungs, their borders, surfaces and lobar divisions, are next treated briefly in the same light of topography. Then the heart and its annexes form the next subdivision. The position of the diaphragm, the stomach, the liver, the spleen, the kidneys and the colon, are the headings under which are grouped important and instructive information, with reference to abdominal exploration and physical diagnosis.

Dr. Ferber says he has used his "situsphantom" for years in his instructions of students in physical diagnosis. Undoubt-

edly it is a useful and convenient expedient for such purposes, and it is of such size and so framed as to be easily handled and referred to, either in the hospital wards or office. Its size is twelve by nine inches, and the coloring and workmanship are excellent. We have taken pleasure in calling the attention of classes of students to it as a desirable companion in their studies.

The second work is given out as a "Manual intended for the use of those who have to teach and to learn the art of physical diagnosis." It consists also of a "Situsphantom" and the tent, treating of the several methods of physical diagnosis, beginning with inspection and running through the ordinary gradation to auscultation. The book is a summary of the physical signs ordinarily grouped under these headings and developed by these methods, and of the several signs pertaining to and found in association with the different diseases of the lungs, pleura, heart and large vessels. The summary is comprehensive, and yet in sufficient detail for the quick reference which the authors aim to afford to student and teacher. The book is interleaved, and with the "situsphantom," or superimposed plates, is recommended to be taken to, and used at the bedside. Yet the space given on the blank leaves would be soon filled, and there is no easy way of adding more, so that it could not be of service for any length of time in that way. It strikes us as not a very convenient book to carry about a hospital ward or private houses.

If the foreign work and the New York one could be combined in one volume, each would supplement fairly the deficiencies of the other. The foreign one needs more of the practical details of the New York volume, and the latter should supply some of the topographical facts of the former.

We desire to add one or two more remarks. The striking resemblance between the "superimposed plates" of Delafield and Stillman (which are claimed to be original) and the Situsphantom of Ferber, suggests either a common origin of the two in some other plates of "*Anatomie Iconologique*," or else that the New York authors have made a rather close

copy (with some unimportant variations) of the foreign work. Any one who compares the "Plates" and the "Phantom" will scarcely think otherwise. The German work was published early in 1877; the latter in the close of 1878. D. and S. make no allusion to Ferber.

The execution of the "Phantom" is much better in its mechanical adjustments, and in its coloring; the work is also cheaper.

W. C.

Lectures on Bright's Disease of the Kidneys—Delivered at the School of Medicine of Paris, by J. M. CHARCOT, Professor in the Faculty of Medicine of Paris. Translated by HENRY B. MILLARD, M. D., A. M. Illustrated. New York: William Wood and Co. 1878.

This work presents concisely the characteristics of Bright's disease. It bears the same relation to a complete work—like that of Bartels's, for instance—as one of Flaxman's outline drawings does to one of Meissonier's finished pictures.

The first and second lectures present, in a clear and satisfactory manner, the normal anatomy of the kidney, with some physiological considerations. In this part of the work some very good illustrations aid the text in communicating a knowledge of structural details.

The third lecture describes the forms of tubular infarctions of the kidney, and the various kinds of urinary casts. The author holds that the clinical importance of urinary casts has been greatly exaggerated. "They are not, as they have been called, 'faithful messengers announcing to the clinical observer the anatomical condition of the kidney,' mirrors reflecting the various renal lesions." As they are formed in the ultimate parts of the apparatus of the tubuli uriniferi, they can only, in any case, furnish information of these parts. Hyaline casts are found in the urine in normal conditions, as pointed out by M. Robin in 1855. They are also met with in various other affections than those of the kidneys, and where there is no albuminuria. The granular casts may aid in establishing the

diagnosis of the *form* of the disease; but it is to be remembered that the lesions of Bright's disease may exist without any casts being found in the urine.

M. Charcot does not believe in the *theory of the unity* of Bright's disease, but in what he calls the English theory, that recognizes several forms of the malady. Three of these are described:—*Interstitial Nephritis*, a genuine cirrhosis affecting primarily the connective tissue; *Parenchymatous Nephritis*, affecting principally the epithelium; and third, the *Amyloid Kidney*, in which the alteration affects principally the small vessels.

The fourth, fifth and sixth lectures are devoted to a description of the two principal forms of the disease. The histological changes in the kidney, and the symptoms and progress are given, and the conclusion arrived at, that they are as distinct clinically as they are from an anatomo-pathological point of view.

The seventh lecture concludes the volume, and contains the author's views in relation to *scarlatinous nephritis* and the *amyloid kidney*.

Two very good chromo lithograph plates are given, showing exterior appearance of the large white, and of the contracted kidney, and a longitudinal section of the former.

The translator has performed his work carefully and well.

J. R. W.

Organic Materia Medica and Pharmacal Botany. By L. E. SAYRE, Ph. G. Philadelphia: D. G. Brinton. 8vo., 220 pp.

The little volume before us purports to be a conspectus of "Materia Medica and Pharmacal Botany," and is especially written for students of materia medica. About sixteen to twenty pages are devoted to a chart of the botanical part of the work. The natural orders to which the various plants described belong are arranged alphabetically. In parallel

columns are given, first, the officinal names; second, the botanical names; third, common names; fourth, habitat; fifth, parts of the plants used; sixth, constituents; seventh, medical properties; eighth, dose, and occasionally remarks on some of the medicines.

Our author next treats briefly of the general structure of plants, as well as of their various organs. He adopts, and we think wisely, the natural system of classification. This, although more difficult to the beginner than the artificial system, will be more satisfactory to the diligent student who wishes to make himself thorough in this branch of science.

The descriptions of special plants occupy the larger bulk of the work. The descriptions are clear and concise, and interest the student of pharmacy much more than the student of general medicine. In fact the work is one which will not find a large sale among physicians and their pupils.

Under the head of "Animal Drugs," our author treats of canthares, leeches, musk, milk, ox-bile, and a few other animal products. A table of the more active poisons, and their antidotes and incompatibles, takes up two pages. A chart of the more important alkaloids with their tests closes the work.

J. I.

Report on Yellow Fever in Ohio, as it appeared during the Summer of 1878. By THOMAS C. MINOR, M. D., Health Officer of Cincinnati. Cincinnati Lancet Press.

From the preface of this pamphlet one learns that on the fourth of November last, the Board of Police Commissioners of Cincinnati instructed Dr. Minor to prepare a report on yellow fever in Ohio, as it appeared in the summer of 1878, for presentation to the yellow fever commission that was to assemble in Richmond, Va., on the nineteenth of the same month, and on the fifteenth this report was submitted. Eleven days

is a very brief period in which to prepare such a paper as this, even though the material for it were well in hand; and while something of crudeness and imperfection almost necessarily attached to such haste, the publication will be found a full and valuable history of the late outbreak of yellow fever along the Ohio river from Rising Sun to Pomeroy; and contains beside the personal experience of Dr. S. H. Collins, of Cincinnati, in the yellow fever at Memphis and Lagrange, Tennessee.

Included in this report is a history of the plague-ridden and plague-distributing steamer John Porter, whose ill-fated condition and influence affords one of the saddest, and at the same time one of the most instructive, lessons of the late yellow fever scourge.

Dr. Minor, in accumulating the material for the report, had the aid of a number of intelligent and courageous medical men who had personal knowledge and experience in the observation and management of the desolating disease, including Drs. Carr and Slough of Cincinnati, and Vance of Gallipolis, who were together or successively in charge of the John Porter. From these various sources are derived the detailed symptoms, progress and treatment of a number of cases, and the author gathers facts that he feels authorizes him to make some "Remarks regarding the symptomatology of yellow fever cases observed in Ohio," and present some points in elucidation of the question, "Is yellow fever a contagious disease?"

As a whole the pamphlet is rich in food for thought, and will aid in impressing us all with the importance of familiarizing ourselves with the nature of yellow fever, which last year's experience has shown may ascend to any latitude, and mount to any altitude, where certain atmospheric, telluric and meteorological conditions combine to invite it. There is abundant evidence in the history of the yellow fever to warrant the apprehension that if there be not a wise application of the technics of sanitary science, an intelligent cultivation of hygiene, a thorough enforcement of prophylaxis as occa-

sion may require, this century will not close without witnessing a devastating epidemic of black vomit along the entire length of the Ohio river and many of its tributaries.

Dr. Minor's report is valuable for study in the line of our necessary education.

J. F. H.

Differential Diagnosis—A Manual of the Comparative Semeiology of the More Important Diseases. By F. DE HAVILAND HALL, M. D., Assistant Physician to the Westminster Hospital, London. American edition, with extensive additions. Philadelphia: D. G. Brinton.

This book is not so large and complete for this day as Da Costa's was at the time of its publication; but as far it goes it is quite as satisfactory, perhaps more so, and it covers the ordinary every-day work of the physician.

The American editor says that it was at first designed to republish Dr. De Haviland Hall's Synopsis of the Diseases of the Larynx, Lungs and Heart; but upon reflection he concluded to make the book cover all the more frequent and more important diseases. But who is the American editor? His name is not found on the title-page; it is not attached to the American preface, nor does it appear elsewhere on the publication. Perhaps it does not matter; but the average American reader, whether professional or lay, has a *penchant* for knowing whose crystallized thoughts he is perusing. Certainly the American editor of this book need not be ashamed of his work, for it is very well done, he having, in a system of parallel columns, tabulated the characterizing symptoms of the chief common diseases in such a brief and comprehensive manner, that the principal points for differential diagnosis may be seen in juxtaposition at a glance.

Diagnosis is demanded in every case of illness, and the ability to make it is a prime qualification in every good physician; but the acutest doctor sometimes fails in this exercise,

because of the indefiniteness of the indications or the mixed signification of the symptoms. Any means, therefore, which will prove an aid to the inquirer in this direction will be of service; and of such character is the book under notice, and all its readers will find it of benefit, whether they are "members of the profession or preparing to become members."

It is not a book that a practitioner wants to sit down and read through, but one that he will be glad to take from his shelf and consult, when he returns from a first visit to a little patient who has a sharp fever, a hoarse moist cough, a sore throat and a maculated skin, to help him determine whether he has to deal with a case of roseola with catarrh, or r  theln, or measles, or scarlatina.

J. F. H.

A Manual of Prescription Writing. By MATHEW MANN, A. M., M. D.,
Lecturer on Clinical Medicine, Microscopy, etc., in the College of Physi-
cians and Surgeons, New York. New York: G. P. Putnam's Sons.

Recently in one of our eastern cities an apothecary was heavily fined for mistaking the abbreviation of ounce, "oz.," for the drachm (  ) sign in a physician's prescription, a bad result having followed the administration of the remedy. The book before us is presented to the profession to inculcate the principles of correct prescription writing, and as complementary to medical college instruction, and thus in a measure avoid such mistakes as the above. Rules are given for the grammatical construction of prescriptions; the metric system is fully explained; the doses of medicines, the medicinal combinations and incompatible remedies are tabulated. There are a great many little facts in the book that are not found elsewhere, and we would warmly recommend every medical student to procure a copy.

Clinic of the Month.

IODOFORM—ITS USES.—Mr. Wyndham Cottle, Lancet, January 18th, gives the following statements as to the therapeutic applications of iodoform:

As an Internal Remedy.—For the later forms of syphilitic disease, especially of the tongue, iodoform has been highly recommended by Mr. Berkeley Hill, and also for naso-pharyngeal affections by Dr. Prosser James. A grain or a grain and a half, with extract of gentian, sarsaparilla, etc., in the form of a pill twice or three times daily, is advised. I have given it in many cases of syphilis. I must, however, confess my experience of iodoform, when administered internally, has not been equally favorable. I did not find the improvement I had hoped for in my patient's condition, while the most marked effects of iodine were very often induced—intense frontal pain, coryza, loss of appetite and sickness, with heightened temperature and quickened pulse. In one case these severe symptoms followed the administration of half a grain twice daily.

As a Local Application.—For some years in America, on the Continent, and in England, iodoform has been a remedy rapidly growing in favor both for venereal and primary syphilitic sores. Its advantages in these cases are attested by the highest authorities. Very useful is it also in most forms of ulceration, whether specific or not, and in almost any situation. It may be applied with advantage to ulcers of the legs, to rupial sores, to buboes that have become open wounds, to ulcerations of the vagina, uterus, etc. This agent has been highly spoken of as an application in cases of post-nasal catarrh, of ulcerations of the throat, of ozena, whether syphilitic or not. As a parasiticide it is serviceable, many cases of tinea tonsurans, sycosis, etc., improving under its influence.

Most soothing, too, is it generally when used topically to malignant ulcerations. Indolent sinuses may often also be beneficially injected with solutions of iodoform.

Two points of clinical importance must, however, be borne in mind in the employment of iodoform. Though a local anodyne, it is in some degree an irritant. It should never, therefore, be applied to an inflamed surface, since it is likely to cause irritation and pain. It is to the indolent ulcer, in which action is absent or deficient, that it acts so beneficially. And, again, iodoform is apt to inflame the sound skin that surrounds the lesion it is intended to benefit, if kept in contact with it for any lengthened period.

Many plans have been devised for applying this drug. On ulcers and venereal sores, previously cleaned and dried, it may, when finely powdered, be lightly dusted, a piece of dry lint being laid over it, and the dressing renewed night and morning, while the discharge is profuse, once daily being afterward sufficient. Tannin or fuller's earth may be mixed with the iodoform in any proportion if it is desired to moderate its action, equal parts of the ingredients being generally prescribed. Iodoform can also readily, by trituration, be made into an ointment with lard or vaseline, or any of the petroleum derivatives, five to twenty grains to an ounce of the base. This mode is especially useful when it is desired to make the application to internal cavities.

Iodoform is sparingly soluble in water and glycerine, somewhat more so in alcohol and warm oil, but readily dissolves in ether, and to a still greater degree in chloroform. This property furnishes us with perhaps the most convenient and easy method of application. A solution of one part of iodoform in six to twelve of either of the last-named bodies is painted with a camel's-hair brush over the surface to which it is desired to apply it. The solvent evaporates, leaving a film of iodoform, and in most cases the process should be repeated once or twice daily. To avoid the pain which this evaporation of the solvent is apt to produce in sensitive parts, such as the nasal fossæ, Dr. Woakes advised "iodoformed wool"—that is,

finely-carded cotton-wool with which an equal weight of the drug has been intimately blended. A piece of this medicated wool is to be placed in the required situation, and allowed to remain there from one to twenty hours.

The extremely penetrating and disagreeable odor of iodoform is its chief objection in practice. I find this is best obviated by great care that none of this powerfully-smelling drug is dropped on the patient's clothes, that when applied it is as far as possible covered over, and in some degree it may be disguised when made into an ointment by prescribing with it some essential oil. Tannin, also, when mixed with iodoform possesses the peculiar property of in some measure removing its odor.

TREATMENT OF ALCOHOLISM.—Dr. F. P. Atkinson (London Practitioner for January) writes as follows:

Some of the most distressing cases we, as medical men, are called upon to attend are those of alcoholism, and it has, unfortunately, fallen to my lot during the last few years to have several from time to time under my charge. A good deal has been written by different persons with regard to treatment, but I do not think this ought to deter one from putting on record his own personal observations, since it is only by accumulation of evidence that proper conclusions can be arrived at. As far as I can see, there would appear to be three different stages in the disease, viz. :

1. *Sleeplessness*, accompanied by a hard quick pulse; loss of appetite in the morning, and morning sickness.

2. *Drowsiness*, accompanied by a slow, somewhat compressible and excitable pulse; complete loss of appetite; and constant sickness. The blood has in it an excessive amount of hydrocarbon.

3. *Delirium*, accompanied by complete absence of sleep and the presence of horrible apparitions, especially at night. The pulse is small, quick, easily excitable and compressible. The blood is deficient in red corpuscles. Hydrocarbons are present in poisonous quantities; the brain undergoes little or no repair. The vaso-motor nerve influence is almost entirely

lost. The treatment I have found beneficial in each stage is the following :

First stage.—Træ. rhei, min. x.
 Træ. card. co., 3 ss.
 Træ. hyoscyami, 3 ss.
 Acid. hydrocyanic. dil., . . . min. iij.
 Sp. chloroformi, min. xv.
 Aquam ad ʒi. quartis horis.

The prussic acid acts as a sedative to the stomach, heart, and brain. The hyoscyamus has also to a certain extent the same effect.

Abstinence from stimulants in this, as in the other stages, is strictly enjoined, but when I find it difficult to get this carried out, I allow a glass of claret three times a day. It is essential that the patient gets plenty of light and easily digestible food, and with this object I order Brand's essence of beef, milk and eggs beaten up together, and barley water. This diet is suitable to each stage. The only thing to be said is the more the depression the more the nourishment.

Second stage.—The treatment should be the same as just described, only it is as well to omit the prussic acid, as there is not the same excitement present.

Third stage.—Chloral should be given in thirty-grain doses every four hours, till sleep comes on, and then repeated as often as necessary. The nourishment should be by no means forgotten, and stimulants should be strictly forbidden.

If chloral is gone on with beyond a certain time, a sleepless condition recurs, when nux vomica and gentian should be given as follows :

Træ. nucis vomicæ, min. x.
 Træ. gentian co., 3 ss.
 Ess. limonis, min. i.
 Sp. chloroformi, min. xv.
 Aquam ad ʒi. ter quaterve die.

This rarely fails to reinduce sleep, but if persisted in long after it has produced its effect, sleeplessness returns. When this is the case the tincture of gentian, calumba or chiretta should be given alone.

THE HOT BATH AS A RESTORATIVE.—There is one remedy whose employment in medicine is almost as old as is the human race, but which yet seems to us to have an important use not generally practiced. We refer to the hot bath. As sudorifics hot baths are sufficiently in vogue, but their employment as restoratives is not so universally recognized.

The phenomena of death from cold show that a lack of caloric in the body is no less paralyzant of animal functions than is an excess of the same force. Evidently the organism was constructed to run upon a certain plane of heat, and can not vary from this without serious results. By numerous experiments upon animals, in the laboratory of Prof. Wood, in the University of Pennsylvania, it has been proven that in a cool apartment death rapidly results after section of the spinal cord, from falling of the bodily temperature, the animal which in a warm room will live indefinitely, dying very shortly in a temperature of 50° Fahr. The cause of the inability of the animal to resist external cold after section of the cord is undoubtedly vaso-motor paralysis. Normally, the temperature of the interior of the body is maintained by keeping an outer layer of partially-cooled tissue between the internal organs and tissues and the outer air. When, however, the power of contracting the superficial vessels has been lost, the organism can no longer maintain this protecting layer, the surface-temperature rises, heat is rapidly lost, and soon the whole body becomes uniformly cooled.

Vaso-motor paralysis is produced by toxic doses of various remedies, and under these circumstances artificial maintenance of the bodily temperature is imperative, forming a most important portion of the treatment of all such *poisoning*. *Collapse* from any cause is largely dependent upon, or, more correctly speaking, largely is, vaso-motor palsy: hence in almost all forms of collapse the use of external heat is of great importance.

Dr. Charles Hunter, of this city, has very successfully applied this treatment to that form of collapse which follows injuries and surgical operations and is known by surgeons as *shock*. The lack of power of alcoholic and other ordinary stimulants

in this condition is proverbial. The pathological state is undoubtedly vaso-motor palsy, the bodily temperature is much below normal, and the rational treatment consists in the hypodermic use of atropia and digitalis and the external employment of the hot bath. This plan of treatment will probably be found to be a very important addition to surgical therapeutics. In the first days of post-fetal life the power of resisting external cold is very slight, and in many cases of still-born children, or of children whose vital powers are almost extinguished at birth, life may be saved by a high external temperature, the little waif being kept in an air of 90° to 100° Fahr., and from the influence of cold walls which shall draw off, as it were, the little store of heat provided by nature; for there is no doubt that radiation is greatly affected by the temperature of surrounding objects.

In regard to the methods of applying heat, it must, in the first place, be understood that wrapping in blankets, etc., are only useful as a means of preventing cooling of the body; that when the animal temperature has already fallen they will not suffice at all. The same may be said of air heated to temperatures which can be readily obtained or can be borne by the attendants. Radiated heat is somewhat better, and often the use of a brisk open fire is of service. The *hot bath* is, however, the only pyretic remedy which can be relied on, when a Turkish bath is not at hand. It should always be a full bath, in as warm a room as can be procured, and should be at a temperature of about 103° Fahr., when the patient is put into it. The duration of the bath must vary with the circumstances of the case. Frequently, ten minutes will be long enough, but if the mouth-temperature does not rise to normal, a much longer tarriance may be advised. During the bath the heat of the water should steadily be increased as fast as it can be borne, if the patient be conscious. It will be found that 110° is about the limit of endurance for most persons; and in unconscious subjects this limit should not be passed. (Philadelphia Medical Times, Feb. 15th.)

Notes and Queries.

TRANSACTIONS OF THE CINCINNATI MEDICAL SOCIETY.—At a meeting of this Society, held January 14th, the following matters were discussed—(Reported by Dr. B. Stanton):

Dr. Goode reported the following case:

On December 11, 1878, I was consulted by L. M., thirty-five years of age, born in Cincinnati, unmarried, and by occupation a lithograph printer. Patient has been a hard drinker; says he has never been under medical treatment, except by myself for gonorrhea about ten years ago. Three weeks previous to consulting me he found it difficult to lie on the right side; and about the same time had a light chill and pain in the left side, attended with some cough. He never had pain in the chest before that time. Recently he has had dyspnea on making any extra effort, which is the only inconvenience. He sleeps well, has a good appetite, bowels regular, and urine normal in quantity and quality. He has continued at work up to time of consulting me.

Present condition.—Temp. $102\frac{1}{2}^{\circ}$, pulse 100, respiration 39; tongue clean. Physical signs show an absence of vesicular murmur, and flatness on left side on a level with the nipple; bronchial respiration and dullness above. The heart is pushed upward and to the right. Vesicular murmur and percussion sound exaggerated on right side with prolonged expiration; fremitus marked on right, not perceptible below the nipple on left side; the left side measures one inch more than the right. I ordered quinia and acetate of potassa. The treatment was continued with daily observation until the 19th, when the pulse was 100, temp. 100° , resp. 35. The line of dullness was much lower, and his general condition was good. He has been passing a large quantity of urine. A small blister was

ordered. The patient was doing well until the 27th ult., when there was an increase of effusion; and on the 28th he had several paroxysms of dyspnea. On the 29th the pulse was 120, temp. 103° , resp. 42, and breathing labored. Aspiration was resorted to, and sixty-four ounces of fluid drawn off, to the great relief of the patient. Subcrepitant râle heard near the point of puncture, which was made between the eighth and ninth ribs on a line with inferior angle of the scapula.

December 30th.—He has been resting well; no pain; lies on either side; heart-sounds heard in normal position; vocal fremitus on left side heard as low as ninth rib; urine free; bowels moved; tongue clean and moist; temp. $101\frac{1}{2}^{\circ}$, pulse 100, resp. 35; has a good appetite; cough a little more troublesome. He continued the same until the 7th inst., when the temperature became elevated, with increased pulse-rate; cough about the same, sputa rusty; crepitation heard at the base of right lung, together with moist râles.

January 8.—Temp. $103\frac{1}{2}^{\circ}$, pulse 104, resp. 33; other conditions about the same. The patient died on the morning of the 9th. Post mortem examination made twenty-four hours after death by Dr. Mackenzie.

Body considerably emaciated. Thoracic cavity only examined. Left pleural cavity contained in its lower part about a quart of serous fluid. The lower portion of the lung was compressed upward and backward, and completely carnified. The upper part of the pleural cavity was obliterated, the lung being firmly adherent to the chest-wall. The posterior portion of the upper lobe was completely consolidated; the tissue was very fine, of a grayish color, and contained a few small cavities, some of which were the result of dilatation of the bronchial tubes; the anterior portion of the lobe was very edematous. There was no indication that any injury had resulted from the puncture. The right lung was firmly adherent throughout. The upper and middle lobes were very much indurated, containing a great amount of fibroid tissue, of a dark gray color on section and almost devoid of air; there were a few small cavities scattered throughout. The lower

lobe was crepitant, but contained a few scattered fibroid nodules; in its anterior portion was a spheroidal mass about one and a half inches in diameter in a state of red hepatization, but no where else in either lung was there any evidence of inflammation of the pulmonary tissue. The walls of the heart were pale and flabby, but the organ presented nothing else abnormal.

That the paracentesis had nothing to do with the death of the patient, there can be no doubt. Had there been a positive diagnosis of phthisis, the operation would have been justifiable. Dr. Bowditch reports a case of phthisis, with pleuritic effusion, in which there was impending death, which was promptly relieved by paracentesis, the patient living for five months in comparative comfort.

Dr. Murphy said that during his present term at the Cincinnati Hospital, two cases presenting features somewhat similar to the case reported by Dr. Goode had been under his care. The first was that of a woman who was admitted on the first of January, three weeks after the beginning of her illness. The history of the early stages of her disease was not fully reported, but at the time of Dr. M.'s first visit he found the patient suffering from dyspnea. She was sitting up in bed, respiration being impeded by the recumbent posture. The countenance was cyanosed; pulse frequent. On examination he found an exudation in the left pleural cavity. Fifty-two ounces of serous fluid were withdrawn by aspiration, which gave marked relief to the dyspnea, and caused a reduction in the frequency of the pulse. The lung expanded so that vesicular murmur could be heard over most of the chest. Digitalis was given, and the patient seemed to be doing well.

In another case, admitted to the hospital after an illness of three weeks' duration, an accumulation of fluid was found in the right pleural cavity. Seventy-two ounces of fluid were drawn off by aspiration, by which the distressing symptoms were mitigated. This patient has not had much cough, and although she has some chronic lung trouble, she goes about the ward and assists the nurse in her duties. For a time there

seemed to be a reaccumulation, but at present the vesicular murmur can be heard.

The speaker thought the operation of paracentesis in these cases of pleuritic effusion contributed greatly to the comfort of the patient, tends to promote recovery, and is attended with but little danger. With care puncture of the lung is not likely to occur; and if it is punctured with a small needle, such as is used on the aspirator of Dieulafoy, it is not likely to result in injury. Aspiration of the bladder, peritoneal cavity, and abscesses in different parts of the body, is attended with but little danger; and in the pleural cavity the risk is so slight that the operation may be regarded as justifiable, where expansion of the lung is interfered with by pressure of fluid. He thought Dr. Goode's operation on his patient justifiable, although there was enough chronic disease of the lungs to have terminated life sooner or later. Suffering was alleviated, and life no doubt preserved by the operation. In many cases he thought accumulations in the pleural cavities are overlooked. He related a case of a man who consulted him a few weeks ago, complaining of acute pain in the left side, between the fourth and fifth ribs; there was tenderness on pressure, no cough, pulse 110, temp. 101°. The patient had taken cold by walking across the Covington bridge on a cold day. A careful examination revealed no friction-sound; there was no evidence of pneumonia; the only evidence of pleuritis was the pain between the fourth and fifth ribs. Morphia was given for the relief of the pain. On the sixth day friction-sounds were heard on the left side, and on the right side, below the scapula; respiration not much embarrassed. There is at this time pleuritic effusion; and if the patient does not get better soon, Dr. M. will think it his duty to aspirate. In cases of chronic pleurisy aspiration should be resorted to, as the operation is not attended with much danger; and if the lung remains compressed, there is danger that edema of the lung may occur, or it may become adherent at the top of the chest. He thinks Dieulafoy's instrument better and safer than the one recommended by Dr. Bowditch.

Dr. John Davis said he did not object to Dr. Goode's procedure in the case he had reported, or differ with Dr. Murphy as to the propriety of aspiration in some cases of pleuritic effusion; but in many cases large quantities of fluid have been removed by the administration of medicines which promote absorption of the effusion. He had recently seen reports of cases successfully treated by the administration of jaborandi (*pilocarpus pinnatus*). It was given in doses of half a drachm of the fluid extract, or four ounces of an infusion of a strength of half an ounce to ten or twelve of water. He recommended a trial of it in these cases, also in cases of acute catarrh of the nose, throat or bronchial tubes.

Dr. Mackenzie said that in general the operation of paracentesis thoracis is innocuous; but there are cases in which it is not harmless. He had recently reported to this society two cases of tubercular pleurisy in which the operation was performed. In one case life was prolonged three months; in the other death occurred in two hours from the shock of the operation. In reference to the question, when should the operation be performed, Dr. Anstie recommends that it be performed if the fluid is not absorbed in one month. In regard to the administration of remedies as compared with aspiration, Dr. M. thought the operation better than large and repeated doses of drastics, cathartics, and such other medicines as are used to promote absorption. It is a simple operation, not attended with much danger, and speedily removes the fluid, allowing the lung to expand, thereby preventing adhesions at the top of the chest, or edema of the lung.

Dr. Comegys said he had had a pretty large experience in chronic pleurisy—had resorted to aspiration at least twenty times, and had had no accident except in one case in which the patient had been long ill; the left side of the thorax was full, the lung compressed, and the heart pushed to right side. The necessity for the operation was plain. A large amount of blood-stained fluid was withdrawn, after which the patient complained of pain under the left clavicle. On examination at the next visit, he found the pleural cavity filled with air in

consequence of rupture of the lung from chronic disease of that viscus. He afterward punctured the abdomen, drew off a large quantity of fluid from the peritoneal cavity, with relief to the patient. He had aspirated in some cases where tubercle was the cause of effusion, with the effect of prolonging life and mitigating suffering. He would not hasten to operate unless the patient's life was imperiled, or there was danger to the compressed lung. In acute pleurisy he does not resort to it. In such cases he likes the use of blisters as the acute symptoms are subsiding. In regard to the instrument, he prefers a simple one—generally uses a canula so shaped that it can be attached to a Davidson's syringe. It is equally as good and much cheaper than Dieulafoy's instrument. He thinks great rapidity in evacuation should be avoided. In regard to the use of jaborandi, he has found it not satisfactory owing to its unpleasant effects. It is very sickening and depressing, and he had trouble to get his patients to persevere with it.

Dr. J. Davis said that the reported cases of disease of the pleura in which aspiration has been performed show that the operation is not unattended with danger, and he wished to express his disapproval of hastily resorting to it. We should consider whether blisters, cupping and diuretics should not be first tried. The administration of jaborandi causes a demand for water, and it is first absorbed from the parts in which it is not found in a normal condition, in cases of chronic pleurisy from pleural cavity. He thinks, perhaps, Dr. Comegys has used it in too large doses. We should not seek to promote absorption too rapidly with these remedies. If we can get the fluid away by such means, he thought it better than to incur the risk of piercing the lung, or causing the patient to die from shock of the operation.

Dr. Murphy said he could understand how we might have ill effects from simple operations, as in bleeding or catheterization, etc.; but in general the operation of aspiration is harmless. True, the lung has been pierced; but the danger of this is so slight that it should not weigh against the greater

danger of compression. Acute pleuritis without any diathesis is extremely rare. Nearly all of the cases of pleuritis which come under the care of a physician are subacute or chronic; the exudations are serous, contain but little plastic lymph, the accumulation is moderately rapid. Blisters are frequently a source of such great irritation as to render their use injudicious. To promote absorption by repeated purgatives is often out of the question, and diuretics are slow in their effect upon the effusion. Aspiration is more rapid, gives prompt relief, reduces cough, promotes rest, and gives nature an opportunity to absorb the remainder of the fluid.

Dr. Davy said he preferred the use of the ordinary remedies to promote absorption in cases of pleuritic effusion; but if they were not soon successful, he would remove the fluid by aspiration. He referred to the use of milk as a diuretic. It has been thus used by the French with success; it is nutrient, builds up the system, and at the same time stimulates the renal secretion; it should be given in large quantities to have an appreciable effect. By the French it has been used in many diseases, as obesity, Bright's disease, bad complexion, etc. He thought that, as a diuretic, koumis would be better. He had tested it, and found it to have a diuretic effect upon himself.

Dr. J. Davis thought the tendency of milk would be to fatten; infants, if they digest their milk, are always fat. He thought that in Bright's disease milk would be of service, tending to relieve the system of the effects of the poison, if not of the poison itself.

Dr. Mackenzie said he had seen milk recommended for diabetes and Bright's disease, but not in the other conditions named by a previous speaker. Given in the large quantities named, according to his experience, a distaste is soon acquired, and the patient rebels against such a course of treatment before any permanent good is accomplished.

Dr. Davy said milk cures obesity by relieving a diseased condition, a disordered state of nutrition; builds up the sys-

tem, and thus tends to relieve obesity, bad complexion, and the other disorders for which it has been recommended.

Dr. Walker thought the free use of milk and fresh butter a good substitute for cod-liver oil. Being much more palatable and more likely to be retained, they can be given where the oil can not be tolerated.

SCHOOL LIFE AND DISEASE.—Dr. J. R. Weist, in a paper recently read before the Wayne County (Ind.) Teachers' Institute, presents many interesting facts relative to school hygiene, and the diseases which have their beginning in the school room. The first disease to which attention is called, is lateral curvature of the spine. Ninety per cent. almost of this form of distortion commences during school life, the distortion corresponding to the position occupied in writing, and a very large proportion occurring in the female.

In spinal curvature, proper breathing and development of the chest are interfered with, and this favors the genesis of pulmonary consumption.

Another cause of tubercular disease found in the school room is bad air; Dr. MacCormac, of London, holds that consumption is always and exclusively the result of breathing air that has already been vitiated by respiration.

It is maintained by Dr. Clark that the educational methods pursued in our schools are, to a great extent, responsible for the neuralgias, hysterias, and other derangements of the nervous system with which our American women are so grievously afflicted.

Myopia in our schools has become very prevalent; and as the pupil advances from the lower to the higher grades, myopia increases rapidly, so that in the junior class of one of our universities fifty-three per cent. were myopic. This defect of vision arises from insufficient or ill-arranged light, or from a wrong position during work, or from too early use of books and slates, and too long continuous use of the eyes upon small or near objects.

Diseases of the brain and nervous system, as manifested by sleeplessness, headache and insanity, are also too often the result of disease originating in the school room, and the manner of their production is fully pointed out by Dr. Weist.

TO CONTRIBUTORS.—Papers have been received from Dr. V. P. Gibney of New York, Dr. George Cannon of Wisconsin, Dr. A. F. Kinne of Michigan, Dr. J. W. Singleton of Kentucky, and Drs. G. P. Pratt and G. C. Smythe of Indiana, and will be published as soon as practicable—the majority of them in the next number. By the way, we may state the first of the Lectures on Surgery, by Mr. John Chiene, F. R. C. S. E., Lecturer on Surgery at the Edinburgh School of Medicine, will be in that number of the *American Practitioner*: our readers have a rich treat before them in these lectures.

In concluding this note, we will repeat what we have more than once said before; we are glad to have from members of the profession, whether living in the country or in the city, whether far away or near, short, practical articles, either reports of cases, or discussions especially of therapeutic subjects, questions relating to diagnosis or treatment of diseases: anything in short that may shed light upon any of the obscurities of disease, or quicken the thoughts, awaken the study, or strengthen the reflections of doctors. The *American Practitioner* can be made invaluable to every doctor, but it must largely depend in the future as it has in the past, upon the help of its contributors: indeed, without these kind friends, to whom the editors desire to express their grateful acknowledgements, it could not live a month.

GLOOMY THOUGHTS AND GLOOMY WEATHER.—Dull, depressing, dingy days produce dispiriting reflections and gloomy thoughts, and small wonder when we remember that the mind is not only a motive, but a receptive, organ, and that all the impressions it receives from without reach it through the media of senses which are directly dependent on the conditions of light and atmosphere for their action, and therefore

immediately influenced by the surrounding conditions. It is a common-sense inference that if the impressions from without reach the mind through imperfectly-acting organs of sense, and those impressions are in themselves set in a minor æsthetic key of color, sound, and general qualities, the mind must be what is called "moody." It is not the habit of even sensible people to make sufficient allowance for this *rationale* of dullness and subjective weakness. Some persons are more dependent on external circumstances and conditions for their energy—or the stimulus that converts potential into kinetic force—than others; but all feel the influence of the world without, and to this influence the sick and the weak are especially responsive. Hence the varying temperaments of minds changing with the weather, the outlook, and the wind. (The Lancet, Feb. 1st.)

TO SUBSCRIBERS—*From the Publishers.*—The last month's American Practitioner contained eighty pages, which, in the value and interest of their contents, made the issue equal to that of any monthly medical journal published at the same price in the world. While the February number has not as many additional pages, it is believed that it will also be highly appreciated by subscribers. A permanent addition of at least sixteen pages to each number, is earnestly desired by both editors and publishers; and it can and will be made if all subscriptions are promptly remitted. From its very commencement to the present the journal has relied almost exclusively upon its merits, and the kind efforts of professional friends to secure subscriptions. It is earnestly hoped that these efforts of friends will continue, and that they may be attended with such success that the American Practitioner will stand second to no medical journal in the country as to its subscription list, as it is already equal to any in the variety and value of its contents, and handsome appearance.

THE AMERICAN PRACTITIONER.

MARCH, 1879.

Certainly it is excellent discipline for an author to feel that he must say all that he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

Original Communications.

THE ELEMENTS OF SURGERY.*

BY JOHN CHIENE, M. D., F. R. C. S. E.

Surgeon to the Edinburgh Royal Infirmary, etc., etc.

LECTURE I.—THE STUDY OF PRINCIPLES—HEALTH AND DISEASE—ACTION OF AN IRRITANT—THE PHYSIOLOGY OF AN INJURED PART—THE BLOOD—BLOOD VESSELS AND TISSUES—THE FORMATION OF INFLAMMATORY LYMPH—THE PROCESS OF REPAIR—HEMORRHAGE—THE REPAIR OF A WOUNDED VESSEL, AND REPAIR IN THE TISSUES GENERALLY, BY BLOOD CLOT.

Introduction.—Among the many advances made in surgical practice during the present century, no two agents have come to play so extensive a part as anesthetics and antiseptics. By the first pain is abolished; by the second putrefaction is prevented. Surgeons are of one mind as to the benefits and advantages of anesthesia, but they are not agreed as to which anesthetic is in all respects the best. There is far greater diversity of opinion, however, as to the value and capabilities and uses of antiseptics. Many surgeons seem unwilling to believe that putrefaction is preventible; others assert that the

* The several lectures in this series are an abstract of certain lectures delivered by me on Systematic Surgery in 1878, and asked for by Dr. Yandell. Much that I say is already known, and has been better said before. Many points which it was proper to dwell upon in the class-room are omitted here. If certain portions which remain be thought too elementary for this place, I

methods in use for this end are not effective, others again that the means are not adapted to every day work, while yet another class regards the dangers arising from putrefaction as of too little moment to demand such an amount of care and trouble to avert them. Having been for some years associated with Mr. Lister in this hospital, and privileged to observe his practice and not infrequently to be intrusted with his wards when he was absent from Edinburgh, I have had abundant opportunity of studying and putting to practical test the doctrines of which he is the exponent. The conclusions which have forced themselves upon my mind are that putrefaction in wounds is, as Mr. Lister asserts, the result of deposit in them of living organisms, the germs of which are present in the air and water; that in consequence of the presence of these organisms certain products are formed, which act locally as irritants and prevent healing of the wound, and which, if absorbed, give rise to constitutional and local symptoms; that these in turn will vary in intensity in different individuals, the differences depending upon, first, the variety of the putrefactive poison, second, its amount, third, the constitution of the patient. As in agriculture, so in surgery, the yield per acre

trust the excuse for their appearance will be found in the fact that they are, in my opinion, necessary for the proper elucidation of the subject.

The authorities to which frequent reference will be made are,—first, John Hunter's Works, edited by Palmer. Second—Anatomical and Pathological Observations, by John and Harry Goodsir, Edinburgh, 1845. Third—Paget's Pathology, edited by Turner. Fourth—Virchow's Cellular Pathology. Fifth—Foster's Physiology. Sixth—Billroth's Surgery. Seventh—Burdon Sanderson on Inflammation, in Holmes's System of Surgery. Eighth—Druitt's article on Inflammation, in Cooper's Surgical Dictionary. Ninth—On the Coagulation of the Blood (Lister), Proc. Royal Society, 1863. Tenth—Contributions to Physiology and Pathology (Lister), Philosophical Transactions for 1858. Eleventh—Chirurgie Antiseptique, by Lucas-Championniere, Baillière, 1876. In this work references will be found to Lister's papers on Antiseptic Surgery in the Lancet, 1867, 1869; and in the British Medical Journal, October, 1868. Twelfth—Contributions to the Germ Theory of Putrefaction by Lister, in the Transactions of the Royal Society of Edinburgh, Vol. XXVII, and in Microscopical Journal, October, 1873.

My thanks are especially due to Mr. A. M. Stalker, M. A., for the care and intelligence with which he has transcribed these lectures from notes taken while they were being delivered.

is governed by the variety and amount of seed sown, and the soil in which it is sown. The organisms are the seed, and vary as the different varieties of the cereals vary among themselves. The tissues are the soil, and vary in their vitality—in their “power of resistance,” as John Hunter termed it—as sand, loam, gravel and clay vary.

Lister, to my mind, has clearly shown that an active faith in the germ theory of putrefaction, as taught by Pasteur, will enable surgeons to work with far better chances of success than is otherwise possible; and that by the adoption of certain methods and use of certain substances termed antiseptics, putrefaction can be absolutely prevented. If these doctrines be, as I believe, founded in truth, their final acceptance is but a matter of time. The methods by which the desired end is now reached may, and doubtless will, be changed greatly and in many ways; for it would ill become one to say that the simplest and best modes of reducing these principles to practice had yet been attained, and that future study and future labor would yield no further improvements. But of one thing I am persuaded, and that is that we owe to Pasteur and Lister a very great addition to the means at our command for prolonging life and preventing suffering, which I need hardly add are the legitimate aims of all true surgery.

The antiseptic or Lister's system owes much to its opponents—more, perhaps, than to its friends. It is safe to say that had not its every part been challenged, its every advance rigorously criticised, it would hardly occupy the place which it does to-day. In science, as in literature and in politics, fair and searching criticism exposes error and advances truth. Certainly no doctrine in all surgery has been more mercilessly handled or contemptuously treated, more sneered or laughed at, than this of Lister's. But with truth and logical scientific deduction as its foundation, the waves of opposition which beat against it fortunately serve to show a weak point in its structure of minor importance, here and there, while the solidity of the principle on which it rests remains conspicuously undisturbed.

When seen from Lister's point of view, the elements of surgery on which the practice rests are, in a certain sense, changed. Where the principles are founded in truth they, of course, remain unaltered; but where errors obtained, a better light has enabled us at least to detect their presence; and while we still continue ignorant on many points, the consciousness of that ignorance is clearly a step toward its ultimate removal. Numerous difficulties have already been cleared up, knowledge has taken the place of obscurity, and complexity has yielded to simplicity. Much yet remains to be done.

I wish here to state that while I know no words in which to express what I owe to the teaching and example of Mr. Lister, yet I alone am responsible for the statements I may make in these lectures—statements which I ask may be regarded as simply the expression of opinions formed during my labors in the Edinburgh Royal Infirmary, which begun as house surgeon under Syme, were continued as assistant surgeon to Mr. Spence and Mr. Lister.

The Study of Principles.—The derivation of the term surgery, or chirurgery, indicates very clearly that at one time it was looked upon as a "handiwork;" and those diseases in which manual means were used to obtain a cure were placed under the charge of chirurgeons or surgeons. But from being merely a practical art, surgery has developed greatly in modern times, so that we have now the two well marked divisions of *principles* and *practice*. In this course of lectures I shall speak of the Principles of Surgery; and it is not intended to treat of the Practice, except as illustrative of the main subject. Let me demonstrate what I mean. In the application of a splint to a fractured limb, the principle is that we should command the break above and below the seat of fracture; and from this arise many variations in the methods adopted and in the materials employed. Wood, pasteboard, pillows, etc., are used according to the necessities of each case. Again, the principles of bandaging are to put the bandage on so that it won't

come off, and to make the pressure equable. Different means and materials attain this end in different parts of the body. A third example is the importance of rest and the avoidance of unrest. In the healing of a wound the parts must be kept quiet, and the materials employed for making the stitches must be chosen according to their fitness for this purpose. It can not be right that you should apply indifferently a flexible silk stitch and a rigid silver stitch; or that the stitches may, as you please, be either few and far between, where each has a large area to keep at rest, or many where each has an easy task to perform. The means adopted for securing rest for the various organs of the body when diseased are, in practice, as various as their functions. The eye is kept at rest by confining the patient in a dark room; the brain, by prohibiting reading and thinking as much as possible; the kidney, by employing other organs of the body to perform their functions, such as the skin by the use of diaphoretics; and so forth.

But while we must always bear in mind that we speak here of Principles chiefly, it must be remembered that it is not always possible to refer to Principles. In many cases we can only be empiricists; and it is well that it should be so. This only means that our knowledge has its limits, and that there are still principles to be discovered, and truths to be learned; and in surgery, as in everything else, that part of the science where the search for truth is still going on, and our ignorance is most manifest, possesses the greatest charm for the inquirer. I shall always take the opportunity of pointing out the gaps in our knowledge, which remain to be filled up by future investigators.

Health and Disease.—The subject which surgery has for consideration is disease; and without spending time in considering disease from a surgical, as distinguished from a medical, point of view, let us merely ask the question, what is disease? The simplest reply is, a departure from health. This brings forward the question, what is health?—and to answer it, I shall make use of a figurative mode of explanation.

Health, as a standard, is the normal condition of the human body, which may be represented by a curve, varying in direction at different periods of life, and in different individuals at the same period of life. The ascending part of the curve represents the time of growth and development, from conception to manhood; a more or less level portion then represents the period of maintenance; and this is followed by a portion downward in direction, signifying old age and decay, ending in death. During the first period we have the deposit in the tissues in excess of the removal; and we have, on the one hand, an increase in the bulk of the organism, which is growth, and, on the other, an increasing complexity in the performance of functions, development. During the second period we have maintenance, and the deposit in the tissues is equal to the removal. During the third period—that of decay—the removal from the tissues is in excess of the deposit.

Taking this curve as our standard, we may figure to ourselves disease as a departure from it in a downward direction. It is the result of a misplacement of the same forces which are at work in a state of health, and this misplacement and fall may take place at any part in the curve. A child born of syphilitic parents is weak and puny, and the passage downward to death may occur shortly after the curve is begun; it may be even before birth in a miscarriage. This departure may be very gradual, and may itself take the form of a curve more or less sharp, as in the various forms of illness; or it may be a sudden instantaneous fall as in a fatal accident.

But there is resident in the body a force which struggles against this misplacement—a power of recovery. You may be injured by the passage of a cart-wheel over your leg, fracturing the tibia and crushing the tissues around: but recovery takes place. In the injured tissues growth and development set in, and from the point to which the curve has fallen a renewed upgrowth takes place. The power of recovery may not be able to lift the patient up to his former condition, and the rest of life will be spent on a lower level than the normal one. For example, after an ulcer is healed we have a scar or

cicatrix. The cicatrix is not true skin—it is but an imperfect substitute for it; but this is the point up to which the power of recovery leads the injured tissue.

Action of an Irritant.—The misplacement of the vital forces in disease is termed an *injury*, using this word in its most general sense. An injury is suffered equally when the leg is crushed by a cart-wheel and when pneumonia is caused by a draught of cold air. The injury in these and all other cases is the result of the application of an *irritant*. There may be direct action of the irritant; this we had in the first example, and in all other similar instances, such as wounds, burns, etc.: or there may be indirect action of the irritant; the pneumonia is caused by such; or a swollen testicle may be produced by gonorrhea in this way. The irritants are the cart-wheel, the hot body, the cold draught, the gonorrhea; the injuries are the crushed limb, the burn, the pneumonia, the swollen testicle. Following the application of an irritant, there is generally a certain definite series of changes to be noted. The injury has a life of its own, and the phenomena in this life appear, grow and develop, are maintained and decay. When my hand is burned, the injured part may either get better or it may die, and this upward or downward progress is represented by a curve such as we have spoken of. When the injury is merely local the recovery or death will be local; but it is not always possible to confine the action of the irritant to a limited area, and then the recovery or death will be general; or the area of the injured part may be limited enough, but the part itself be an organ necessary to existence, and in this case also the effects will be general. Observe also that as before mentioned the recovery may be complete or partial.

The Physiology of an Injured Part.—We have now to consider more in detail the physiology of an injured part. There is however one exceptional case which does not admit of consideration in this way. The injury may be so severe and affect so powerfully the vital functions of the tissues, that death of the tissue may take place directly. The passage from life to death is immediate. Putting aside this one exception we note

that a vital process goes on in the tissues after every injury, ending either in recovery or in death. During health there is a constant interchange of materials going on in the tissues. The blood is the agent which is continually occupied in conveying something to the tissues and in receiving something from the tissues. After the application of an irritant the blood still continues its functions, but there is no longer maintained the equilibrium between the two processes of addition and withdrawal. There is now an *increased afflux to*, and an *increased deposit in*, the injured tissue. The materials are there for the maintenance of the vital functions: there is however a misplacement of these materials; they are carried to the injured tissue in excessive quantity, and they are deposited in the injured tissue in excessive amount. In health the functions of the blood are performed imperceptibly and the functions of the tissue are maintained intact; in disease there is an appreciable alteration in the structure and disorder in the functional activity of the affected part.

I have mentioned incidentally that an irritant may act directly or indirectly. A swollen testicle may be due to a kick—an instance of direct action; or it may be due to gonorrhea—an instance of indirect action. In indirect action we have the nervous system acting as a communicating channel for the irritation; in direct action the effect is produced apart from the nervous mechanism. A beautiful experiment of Mr. Lister's illustrates the direct action of an irritant. When the ciliated cells are removed from any part of the body where they exist, the cilia continue their usual lashing motion for *some time* after removal. Mr. Lister removed a piece of the tongue of the frog, and observed with the microscope the ciliary movement going on. He then brought a hot iron wire near the cilia and the movements were quickened. This was withdrawn, and again the speed of the movement fell. The hot iron was again brought near, and quickening was again produced, though not to such a marked extent. It was brought nearer still, and the motion now became slower and at last ceased. When the hot wire was suddenly brought near

the stage of microscope the ciliary movements stopped at once ; the ciliated cell was dead. All the effects of the irritant here must have been produced without the intervention of a nervous mechanism, as there was none present. Thus we are able to say with certainty that an irritant may act directly on the tissues.

The foregoing experiment brings out other facts of very great importance. The first effect of an irritant, if not excessively powerful, is to stimulate the part and quicken the movements. If continued longer or if rendered more powerful the irritant depresses the tissues and the movements become slower. And if sufficiently prolonged and sufficiently severe the irritant may cause the death of the tissue. Illustrations of this are constantly occurring. Rub the back of your hand briskly and you stimulate the tissue and it becomes red. Apply a stronger irritant in the shape of a mustard poultice and you produce a blister, in which the vitality is depressed. With a severe irritant, as a red hot iron, you destroy altogether the life of the tissue. But the strength of the irritant is not the sole condition which determines its effect. A second condition on which the action depends is the strength of the tissue. On any one whose work requires long periods of sitting, the continued pressure on the gluteal region produces no injurious effect ; but let the same individual be confined to his bed for some time with illness, so that the vitality of his whole body is at a lower level, and under these circumstances the pressure that was formerly borne with ease can no longer be endured. Bed sores form on the gluteal region : in other words the irritant which formerly produced hardly any effect now depresses and kills the tissue. Again, it is an unsafe thing to apply a mustard poultice to a child who is suffering from a severe attack of measles, because that which formerly acted merely as a depressant may now, in the enfeebled state of the body, go much further in its effect, and a sloughing ulcer may be formed ; that is, the tissue may be killed. The action of an irritant depends then, first, on the strength of the irritant ; and secondly on the strength of the tissue.

Such is the action of irritants and their mode of causing an injury. There are three elements in every part of the body which come into prominence at any part which may have been injured. These are the *blood vessels*, the *blood*, and the *tissues* surrounding the vessels. The study of the physiology of these elements is of the utmost importance if we wish to understand the pathological changes that take place in them.

The *blood vessels* which come into prominence in this consideration are chiefly the capillaries and small arteries. The walls of these are thin and membranous, and are probably a continuation of the epithelial lining of the larger arteries. The feature we have especially to note about them is that they allow of free outflow and influx of some of the elements in the blood and surrounding tissues.

The *blood* consists of two elements, the liquor sanguinis or blood-plasma and the corpuscles. The corpuscles are of two kinds, the yellow and the white. The white are much the less numerous. They are more or less globular in shape, and possess a nucleus. They display amœboid movements, shooting out and withdrawing processes of their protoplasm, and by this means moving about from place to place. They absorb substances from without, and excrete effete matters. Growth, development, maintenance, and decay go on in each of them individually. Thus, we are able to predict that their function will involve active movement. The yellow corpuscles (red when seen in mass with the naked eye) are much more numerous than the white corpuscles, but perform a merely passive function, carrying oxygen to the capillaries where it is appropriated by the tissues, and carrying back the effete carbonic acid which is excreted by the tissues. In the ordinary state of the blood the corpuscles float freely in the liquor sanguinis, but there is a remarkable change which the blood frequently undergoes, and the conditions and nature of this change are of special importance in a pathological respect. When blood flows from a wound it clots or coagulates. The importance of this change may be imagined when we hear John Hunter saying that there is more to be learned of the use of the blood in the animal

economy from its coagulation than from its fluidity. Hunter held that wounds may heal by blood-clot, and of this we shall have a good deal to say hereafter. In the meantime let us direct special attention to the nature of coagulation.

For a long time it was held as an unquestioned truth that the coagulation was simply the change attending the death of the blood. But I trust to be able to show you that it is anything rather than a process of death. Several distinct steps are observed in clotting. The first change we observe when blood is poured out of the living body into a vessel is that it grows viscid and flows with difficulty. It then passes into the form of jelly or clot. If you observe the surface of this jelly narrowly you will see globules of a watery-looking fluid gathering on it. If the vessel be transparent it will also be noted that a layer of this watery fluid lines the sides of the vessel, and that in fact the clot has now contracted greatly and is suspended in the fluid. If this clot be washed the red corpuscles will be carried away. What is left is a white stringy material, fibrin. This fibrin does not exist in the fluid blood. It is formed by a chemical union of two substances—fibrinogen and fibrinoplastin. The fibrinoplastin is in the white blood corpuscles, and the fibrinogen is in the blood plasma. A third element is referred to by some observers—the fibrinferment—which is supposed to set up the change. But this we are really ignorant of as yet. The watery fluid in which the clot is suspended is serum or the liquor sanguinis after the fibrinogen has been subtracted from it to form the clot.

A modification of the process is observed when the coagulation takes place very slowly. The colored corpuscles form rouleaux, and when the clotting takes place quickly these rouleaux become entangled in the meshes of the fibrin that form; but if the formation of fibrin is from any cause delayed, or takes place very slowly, these rouleaux have time to sink to the bottom, which they do readily enough. We then have a clot which is colorless. This may be produced by cold or the addition of alkalies to the blood. And just as these reagents produce a colorless blood-clot by delaying the forma-

tion of fibrin, so on the other hand it may be produced by increasing the size only of the rouleaux. As long as the colored corpuscles float singly or in small rouleaux, they will not sink quickly, just as one feather may float for a time in the air; but just as a bundle of feathers comes down immediately, so does the large rouleaux of colored corpuscles sink rapidly. The formation of rouleaux seems to be hastened, and they collect in large masses in the blood of an inflamed part, possibly by rendering the corpuscles stickier; and hence we have the appearance known as the "buffy-coat"—a layer of colorless clot on the surface of the colored clot. The "capped" appearance of the clot is most marked when a buffy coat is present; in it the fibrin is increased relatively to the blood corpuscles. The contraction is due to the fibrin; hence, the greater capping seen when the blood corpuscles are in small amount.

What is the cause of coagulation? We have coagulation when the blood flows into an ordinary vessel. We frequently have coagulation within the blood vessels when they are injured; and we have clotting between the lips of a wound in which the tissues are injured—the injured tissues are depressed, their vitality is lowered in consequence of the irritation.

An aneurism may be cured by the formation of a blood clot in the sac: the walls of the cavity are in a condition of lowered vitality. If a needle be pushed through the wall of a living vessel through which the blood is flowing, and then be examined after some time, a clot is found to have formed around it. From facts such as these the conclusion has been arrived at that clotting takes place when the blood comes into contact with dead or dying matter, or with tissues which by the application of an irritant have been depressed: their vitality has been lowered. An example of dead matter will be afforded by the jar into which the blood is poured, or by the needle passed into the cavity of a living vessel. An example of depressed tissue will be found in the wall of the aneurismal sac, or in the lips of a wound which are in a depressed state of vitality, and to that extent are dying—are an approach toward death.

In the *tissues*, the cellular elements are those which more particularly claim notice from us as surgical pathologists. And when I speak of the cells, I do not take the word in any one of the numerous meanings which have been attached to it. Whether we take it as meaning a nucleated mass of protoplasm with a cell wall, as Schwann would have us do; or whether we discard the cell wall, with Max Schultze; or whether we hold with Stricker, that a simple mass of protoplasm, without nucleus or boundary wall, is the cell—matters not. That thing which is the active agent in the tissues, which takes up nutriment and elaborates it to form muscle, bone, etc., is what we understand as the “cell.” The body consists of a mass of innumerable cells; and the sum of the life of these is the life of our bodies. Each of them is produced from parents,—grows, develops, is maintained and decays, and can act, to a certain extent, an independent part when occasion requires it.

The most convenient way of examining the tissues and the circulation, in a state of life and health, is to do so in some transparent membrane which may be suitable for microscopic purposes; and such a membrane is ready to hand for us in the web of a frog's foot, or in the mesentery of the frog. On directing attention to a particular vessel we observe the current of blood hurrying on swiftly in the center of the tube, but at the sides there is perceptibly much slower movement. Here the colorless corpuscles are seen moving along very slowly, and now and then sticking for a time to the wall of the vessel. In such a membrane we can observe the pathological changes which follow the application of an irritant; and this brings us to a consideration of the phenomena to be observed in an injured part, *i. e.*, an irritated part. In the web of the foot irritation may be produced by the application of heat, or by such agents as mustard or chloroform. If we choose the mesentery of the frog for observation, the exposure to the cold air is all that is necessary for irritation. Attention is now to be directed (*a*) to the vessels, and (*b*) to the blood flow.

In the *vessels*, the first thing to be observed is contraction, which, however, is very evanescent, and has often not been observed at all. Following closely on this there is *dilatation* of the walls, and increase in the caliber of the vessel.

The *rate of the blood flow* is, in the first instance, slightly quickened. This, like the contraction of the vessels, is merely momentary, and is quickly followed by a slowing of the current, so that you can observe the size and shape of the corpuscles quite easily. This slowing goes on increasing until complete stoppage or *stasis of the blood flow takes place*. This stasis and the dilatation of the vessels are the essential results of irritation. Their causes are exceedingly obscure, and we can not speak with certainty on any point here involved. But still something has been done of late years to clear up the difficulty; and I will now briefly communicate the results of recent researches.

First, as to dilatation of the vessels. This follows on irritation; and you will remember that I said before that irritants act in two ways, directly and indirectly—directly on the tissue to which they are applied, and indirectly through the nervous system; and that the effect of an irritant, although at first stimulant, is mainly depressant. In the subcutaneous tissue of the frog, there are spaces filled with pigment, which communicates a color to the skin. In a state of health the frog is light in color, but when the frog is out of health the color darkens greatly. Microscopic observation reveals that during health these pigment spaces are small and compact—the frog is of a light color; but that during an unhealthy state, they expand greatly by shooting out processes—the frog is dark in color. When the web of a healthy frog is irritated, the pigment spaces expand in the irritated area; in the surrounding parts they remain in their normal contracted condition. We can see the effects of the irritant on the tissue composing the pigment space; and we are justified in assuming that the irritant acts in a similar way on the walls of the blood vessels. They also lose their power of contraction; their tissue is also depressed or injured, and the injury is the result of the de-

pressant action of the irritant. The evanescent contraction sometimes observed in the early stage is due to the stimulant effect of the irritant. The irritant acts directly on the tissue to which it is applied.

Somewhat different is the case of the irritant which acts indirectly through the nervous system, as, for example, when an attack of pneumonia follows exposure to a draught of cold air. It has been shown that if the sensory nerve of the ear of the rabbit is stimulated, this stimulation is followed by dilatation of the vessels of the ear; this dilatation is due to a change in the condition of the vaso-motor center from which the nerves which supply the walls of the vessels take their origin. This change in the vaso-motor center is one of depression; it loses its command over the vascular walls—the blood vessel dilates. We have, I believe, in this experiment the clue to the explanation of the way in which the indirect irritant acts. The sensory nerves of the part to which the irritant is applied convey an impression to the vaso-motor center; it is depressed, and as a consequence the vessel dilates. There is undoubtedly a nervous connection between the skin over an organ and the organ beneath—between the skin of the chest and the lung; there is also an intimate nervous connection between organs in functional relation, as the ovary and mamma, the urethra and testicle—during ovarian irritation the mamma is turgescient, during an attack of gonorrhea the testicle may inflame.

Secondly, the stasis requires explanation. And I now ask you to go back to that part of these lectures where I spoke of the coagulation of the blood. Remember that I tried to impress upon you that there were three stages in clotting—viscosity, jellying and contraction. We also saw reason to believe that these results followed when blood was brought in contact with depressed tissue. The dilated vessel indicates depression. The blood in contact with the dilated vessel becomes sticky or viscid; this viscosity first slows its flow, and if the depression continues, the viscosity increases, the blood flow stops—stasis takes place. This stasis only occurs in the

irritated area, and at the edges of the stasis area, where the blood current is still going on, the stasis blood is constantly being washed away by the fluid blood. This was shown first by Lister, and he first drew the deduction that the stasis is due to the condition of the vessel walls.

In consequence of the dilatation of the vessels in the irritated area we have an increased quantity of blood in and necessarily an increased afflux to the injured tissue. It remains now to consider how there is an *increased deposit* accompanied by an *increased production* in the injured part.

The increased deposit comes from the blood. As you are all aware during healthy nutrition, blood plasma is constantly flowing through the walls of the capillaries. It is poured out in excess in an injured part, as you may observe from the fact that an injured muscle is softer than a healthy one. If you observe also the dressing that is taken off an incised wound, you will see that it is saturated with a clear fluid. This exudation is the blood plasma. There is increased intra-vascular pressure in consequence of the stases in and increased afflux of blood to the injured part: as a result there is increased exudation of the fluid portions of the blood into the irritated tissues through the dilated vascular walls. The thinning of the vascular walls is also an important factor in the process. The fluid portions of the blood pass more easily. Of the two kinds of corpuscles I see no reason to believe that the colored perform any essential part in an irritated tissue. They are certainly to be found outside the vessels, but the rupture of the thin walls of the dilated vessel will account for this. It is different with the white corpuscles. Williams long ago pointed out the tendency of these bodies to cling to the sides of the vessels. Addison in 1842 maintained that pus corpuscles and white blood corpuscles were identical, and that the latter migrated through the walls of the capillaries: and though the hypothesis was strengthened by Waller, who in 1846 said that he had seen the migration going on, yet the statements of these observers were unheeded for many years, until the same story came from Germany: after Recklinghausen in 1863 published

the results of his study of the white corpuscles, and proved that they had a capacity for movement in themselves. He directed attention to what had been previously shown by Wharton Jones in 1846. He observed them shoot out and withdraw their protoplasmic processes, and by treatment with coloring matter he discovered that they had the powers of absorption and excretion. In 1868 Cohnheim demonstrated that when a part is irritated the colorless corpuscles collect in great numbers, and that by means of their processes they can make their way through the membranous walls of the capillaries. This process takes place normally in the healthy tissue, though it requires great patience to see it; but it can be seen without difficulty in an irritated part. I have seen these corpuscles pass through, and after their passage move about in the surrounding tissues and there divide.

But this is not all: in addition to the increased deposit of the fluid and corpuscular elements of the blood, there is increased production in the irritated tissue. This increase is due in part to division of the migratory white blood corpuscles, but in an irritated part there is cell proliferation also. The cellular elements proper to the tissues multiply by rapid division. This is due, I believe, to overfeeding of the tissue. This proliferation goes on in health as the normal method of growth, but in disease it is in excess. It must not be supposed that the increased production is an evidence of increased vitality. The increased proliferation is due to the overfeeding of the tissue; the normal equilibrium is lost, the cell elements are overfed, they proliferate, their normal functions are in abeyance like a hot house vine highly manured, which brings forth many bunches which if allowed to remain will never come to maturity, like the stunted trees in a wood which is never thinned; in both there is an increase in the number of the bunches and plants at the expense of the parent vine and the neighboring trees. With an increased growth we have decreased vitality, a tendency to degeneration and decay; hence the numerous cell elements in an irritated tissue do not go to form normal tissue, but form various aborted products, the

chief of which is pus. It is at present an unsettled question as to the chief source of the pus. Is it due mainly to proliferation of the migratory white blood corpuscles, or to proliferation of the original cell elements of the part? The truth probably is that both causes are at work in highly vascular tissues; in nonvascular parts, as shown by Goodsir in cartilage, the original cell elements are the main if not the whole source of pus supply.

The formation of "Inflammatory Lymph."—When these changes have taken place, and the balance of nutrition has been destroyed, there is produced a substance which to some may appear altogether of a peculiar nature. There are present in the irritated tissue the liquor sanguinis, which has been poured forth in excess, and the white corpuscles, which have found their way through the walls of the vessels. In these two substances have we not all the elements for the formation of the fibrin of a blood clot? The irritated and depressed tissue is there *ex hypothesi*; the fibrinoplastin and fibrinogen will, in an ordinary case of irritation without rupture of the vessels, be unincumbered by the presence of the yellow corpuscles. All the circumstances favor the formation of the colorless blood clot. But you will not find that the identity of the substance that forms in an irritated part with a colorless clot is recognized in the name that is given to the former. "Inflammatory lymph," the name referred to, is an objectionable expression, for this reason, that it multiplies distinctions where none really exist. It prevents us seeing the application of principles of sound physiology to the treatment and examination of pathological questions. And it is because I am so desirous that you should clear your mind from the confusion of ideas that is sure to follow the using of different terms for the same thing, that I have been thus minute in the treatment of the physiology of the blood. And henceforth you will understand that I use the terms "inflammatory lymph" and "colorless blood clot" as synonymous.

Process of Recovery.—At several stages in the preceding series of events a stop may be put to the process, if the irri-

tant is withdrawn. In simple language "recovery" may take place. When there is active congestion and dilatation of the vessels, withdrawal of the irritant produces recovery of tone, and at the venous extremities of the capillaries the corpuscles commence to break away and resume their normal course—a process which soon spreads over the whole affected part. If there has been stasis of the flow, the way of recovery is the same. If there has been effusion of the liquor sanguinis and white blood corpuscles into the introcellular spaces, these are again absorbed by the vessels and resume their normal functions. But if "inflammatory lymph" has formed and occupies a definite area, there is the possibility of a new mode of recovery; and the clear comprehension of this last is of the utmost importance in the Principles of Surgery. All the injuries which call for surgical interference present examples of it, and accordingly the whole question of the *Process of Repair* now opens out before us.

GALVANISM IN THE TREATMENT OF SCIATICA.*

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Until the early part of 1876 my ideas as to the *modus operandi* of electricity were crude, aught but clear, and I fancy I do my profession no injustice by saying that my views were on a par with those entertained by the major portion of its membership. Clinically I was at a loss to appreciate the value of one current over the other.

The question was often asked me by young men on the threshold of practice, "What kind of battery shall I buy—*i. e.*, which will be the more serviceable in general practice, viz., a galvanic or a faradic?" I invariably advised the pur-

* Read before the New York Academy of Medicine, February, 6, 1879.

chase of a faradic machine, giving as a chief reason therefor, my belief that they could do less harm to their patients with this than with the galvanic.

In the hospital we have had for several years both kinds of apparatus, and with both I have had a kind of valueless experience—valueless, I say, because I had kept no very reliable notes as to the clinical effects of the respective currents. If one battery chanced to be out of repair I used the other, and *vice versa*. True, I had been taught that the galvanic induced chemical changes which the other could not; that the one was a powerful agent for harm, while the other was inoffensive. So that I used the one cautiously, employing always a mild current, with the poles placed as the books directed; and the other (the faradic) I used lightly, because I could not get our patients to tolerate a strong current. The cases, be it noted, were, however, those of infantile spinal paralysis; and while we employed the currents in neuralgia in the out-door department, but little benefit was obtained.

Just here let me state that I have seen muscles in cases of spinal paralysis respond to galvanism and not to faradism; have seen those same muscles, later on, respond to faradism; have kept them under electrical treatment year after year, and still those muscles to-day are in such a condition that I am led to believe a perfect recovery will never take place. Yet it is a law said to be well established, that if we find a muscle with electro-contractility to faradism abolished, and yet respond, however feeble, to galvanism, a favorable prognosis may be given. My own observation, extending over several years, leads me to consider this as a law by no means well established.

When speaking with intelligent and prosperous medical men as to certain good results I have obtained from galvanism, they will say, "Well, that has not been my experience." And when I question them as to the kind of battery they employed, especially as I see in the office a faradic machine, the answer will come, "Why, that galvano-faradic machine," or "that electro-magnetic battery you see on the table."

Then, again, one hears that this patient has had "electricity" for such and such a length of time, without any good result. The kind of electricity used is not specified, and this important point is not learned unless by a close cross-examination.

Now, why does there exist such widespread misconception as to the uses of the two currents? It can not be that our electro-therapeutists are unwilling to communicate their knowledge; it can not be that our literature is poor in treatises on this subject.

I venture to suggest that there is too much theory as to the peculiar mode of action; too much space devoted to a special form of battery; too many wood-cuts of apparatus; too much of the business style of reporting cases—in fact, too few cases reported after the manner in which cases in other branches of medicine are reported. We read of too many miraculous cures; and then that unfortunate term, *séance*, carries with it an air of mystery from which the practical man recoils.

It was in January, 1876, as I have already intimated, that my attention was directed more particularly to the treatment of sciatica by reading, with much interest, a report of six cases of this obstinate affection treated with galvanism. These were reported in the *Lancet* for December 18, 1875, by Mr. S. J. Knott, Medical Superintendent of Galvanism in St. Mary's Hospital.

The cases, it seems to me now, might have been improved more permanently, if the strength of the current had been greater, and the applications made daily instead of tri-weekly, in some instances. In only one case does he speak of the length of the sitting, and here it was "twenty minutes all over the part affected." He does not tell us the relative position of the poles, and I judge from his report that he attaches little importance to the relative course of the currents. From the expression "all over the parts affected," just quoted, it would seem that the *purely* constant current was not always employed; *i. e.*, it would seem that while he used the galvanic current, which is known as the constant current, he really produced results by moving the electrode from place to place

(interrupting the current), for which he condemned the faradic, namely, "contraction of the enfeebled nerve." For it is well known that contractions take place on opening and closing the current. I determined to try what could be effected by longer and more vigorous applications.

Until Mr. Knott's cases were published, cases reported in such detail as to make an impression on my mind had not fallen under my eye. From that time forth I realized the necessity of records, and on such records my present paper is based. Be it observed, however, that the histories are not as full as I should have liked, and the applications were not always made by one sufficiently experienced.

Naturally, where a change in service occurs three or four times a year, as it does among the members of our hospital staff, some men enter more fully into the spirit of a subject than do others, and results vary accordingly.

To enhance the value of such as I shall report, I have made an effort to obtain the ultimate results of cases treated by galvanism; and with a long list of names in my hand, I have traveled throughout the length and breadth of this great city, winding my way through dark alleys and clambering up rickety stairways, to find, in many instances, that my patient had either given the wrong address or moved to parts unknown.

Such records, then, as I have been able to complete it is my purpose to offer as a clinical contribution to this perplexed question. The battery used almost exclusively was the Leclanché, consisting of thirty elements. A glass jar contains a solution of sal ammoniac and water, in which both poles are placed: the positive is composed of carbon, packed or set into a mixture of powdered peroxide of manganese and carbon, and hermetically sealed in a porous vase; the negative is composed of a plate or pencil of amalgamated zinc. This makes up the element.

This, after some varied trials, has been found to best meet the requirements for stationary hospital battery. A portable battery, with from eighteen to thirty-two cells, can be employed with good result.

CASE I.—*Four months' standing; cure after two weeks' treatment; no relapse after fifteen months.* On the 6th of September, 1877, A. McG., a laboring man, forty years of age, applied at the out-door department of the hospital for relief from pain and lameness in the right lower extremity. For four months he had been suffering by day and by night, though more acutely by night, while the pain he referred to the popliteal space, sharp and lancinating in character, began about the hip and came on paroxysmally. He knew of no cause, unless it were exposure to draughts of cold. The malady had been growing worse, and the patient had begun to feel that his suffering was intolerable. He had always enjoyed good health, although addicted to a free use of alcohol. He claimed that some relief was obtained by walking.

On pressure directly over the sciatic nerve, at its exit from the pelvis, pain was felt along the posterior surface of the thigh down into the popliteal space. The positive pole, with the sponge well moistened, was applied over the lumbo-sacral spine, and the negative in the popliteal space. A current as long as could be borne was employed for five minutes, after which the patient experienced much relief.

7th. Considerable pain last night from knee to ankle, and this morning it has returned. A current of the same strength for ten minutes employed this morning, the negative pole being moved so as to embrace in the circuit the locality of pain. He does not feel so marked relief from this application as he did from the one on the morning preceding.

8th. Rested well during the night, and feels encouraged.

10th. Had a little pain during the night, and this morning there is a sense of numbness in popliteal space.

11th. Worked the greater part of yesterday, something he has not been able to do for several weeks. Had no pain during the night, but this morning has occasional darts of pain down the limb.

22d. A strong current has been used nearly every day to date. Until the 15th the paroxysms were mild and infrequent, although none came on during the night. Since that date none have occurred. The patient is discharged, with directions to return in case of relapse. He did not return.

January 13, 1879. I saw him at work, when he assured me that he had not had a twinge of pain since September, 1877; that he is free from lameness—is in fact cured.

CASE II.—*Three years' standing; relief after four applications; relapse; not treated again.* E. C., female, domestic, aged forty-five, anemic, presented for treatment April 10, 1878. She is quite lame this morning, and suffers from a "biting gnawing" pain in the distribution of the sciatic right side. There is always present a sense of soreness, and to this is added the paroxysmal attacks producing convulsive movements of the flexors of the limb. These occur most frequently during the night, and such has been her history for three years. No adequate cause can be found, unless it be found, as she claims, in working and sleeping in a basement. The veins of the leg are varicose, however, and this condition may stand in a causative relationship.

Six dry cups are applied along the course of the sciatic, from its exit to the lower third of thigh, immediately after which she expresses herself as feeling much better, and is able to stoop with ease—an act before this difficult of execution.

12th. She had no pain on the 10th or on the 11th, but this morning it has returned in a light degree. She slept both nights without waking once, something she has not done for months. Nine cups to-day, immediate results of which not recorded.

May 4th. The good effects of the cupping have not continued, and she is transferred this morning to the electrical room; and a strong constant current—positive pole near exit of nerve and negative in popliteal space—for about five minutes, is followed by immediate and complete relief.

6th. Reports that she has felt no pain of any import since 4th. Repeat the application in same strength and for same duration.

7th. Free from pain last night. Another application.

8th. Passed a night of suffering, though she is comfortable this morning. She never came after this date, and on February 2d of present year I succeeded in finding her. She was still lame and suffering as she was when she first made application for treatment last spring. She claimed that her work prevented her from continuing her attendance; but from the way in which she spoke, I judged that the relief was not sufficiently great to hold out any encouragement.

CASE III.—*Three months' standing; six applications; cure and no relapse after twelve months.* W. McG., farm hand, aged fifty-two years, came under treatment January 2, 1878, with a history of sciatica of three months' duration, coming on without apparent

cause. The pain was worse after he had been sitting or lying a while. He was suffering considerably when the examination was made. Galvanism was ordered daily, and the applications were made only every other day, and the current was not used as strong as was directed. The patient had in all only about a half dozen sittings; and it is recorded that after the *mild* currents he felt no relief, while after the *strong* he felt much improved. The case, however, was cured, and up to the present time there has been no relapse.

January 10, 1879. I obtained the above information regarding his cure from parties with whom he stopped. I have since heard from the patient, who fully confirms this report.

CASE IV.—*Five years' standing; eight sittings; cure and no relapse after five months.* J. E., aged fifty years, laborer, applied for relief August 27, 1878. He was quite lame, and complained of pain in the distribution of right sciatic from exit to ankle. There is a marked degree of stiffness about the hip-joint; in the dorsal decubitus the thigh can hardly be flexed to a right angle, because of muscular resistance and pain, which is referred to the posterior surface of the limb; the same resistance and pain are met with on ab and adductions to normal limits. There is perceptible atrophy of the gluteal group, and the thigh measures one inch less in circumference than its fellow, while the leg at calf shows no atrophy. He dates his troubles to an overstraining and contusion six years ago, and though active symptoms were late in following, it seems probable that his ideas as to cause are correct.

The first symptoms experienced were weakness, easily induced fatigue in this limb, slight pain toward night. This pain soon assumed a darting character, recurred quite frequently, and was worse at one time than at another. During the two or three years just passed these pains have been very severe, and the lameness has increased *pari passu*. There is no history of rheumatism.

A strong current, as strong as he would bear, was administered daily, the positive pole over the trunk of nerve, and the negative in distribution of the same. After seven or eight sittings he was relieved, and did not call again until January 15, 1879, when he came at my request, reporting that he has had no pain about hip or thigh since the treatment last fall; that he can work all day and sleep all night on the side which was the seat of disease (this was impossible before galvanism was used); that the heat and natural feeling have returned to the limb. He says that he has occasionally slight pains

in the muscles of the calf and around the knee, which have come on lately from exposure. For these salicylate of soda is prescribed, and in less than a fortnight he is relieved.

The first and fourth of the cases just narrated were treated with strong currents, and most excellent results were obtained. The second was treated by a member of the staff just coming on duty, and lacking that experience in the administration of electricity which is necessary to success. With four applications properly made, the relief should have been such as to encourage the patient in continuing until a cure had been wrought. The third case did well, although only two or three applications of a very strong current were made, and the testimony is that prompt relief followed each sitting of this nature.

The number of elements usually employed when a "strong current" is spoken of, varies according to the condition of the battery and the sensibilities of the patient. Some patients can not tolerate more than twelve or fourteen cells, and around the sponges an erythema is produced. Then again a patient may be able to bear eighteen cells one day, and the next day the battery may be working so that twenty-four, or thirty even, are borne quite as easily. We first test the strength on our own hand, then place the electrode on the patient's limb, and add as many more cells as he will bear. As illustrative of the difference in the administration of galvanism, the following cases will serve:

CASE V.—*Twelve months' standing; decided relief under vigorous applications of galvanism; case protracted under a milder current; ultimate result good.* December 22, 1877, B. D., a coachman, aged thirty-eight years, came under treatment for a sciatica of left side of one year's duration. By reason of his occupation he had been exposed to wet and cold at all hours of the night, and to this exposure he attributed his disease. At first his suffering was brought on only by prolonged exertion, but latterly the pain has become constant, and is felt from hip to ankle. Sharp attacks come on frequently, and these seize him on rising from bed or from a sitting posture long maintained. Changes in the weather seem to aggravate his symp-

toms. In bed he often finds relief by pressing his foot firmly against the foot-board. A descending current this morning, as strong as the patient will bear, for about eight minutes, is followed by complete relief immediately.

23d. Was remarkably well yesterday afternoon, and had a good night's rest up to four o'clock, when the pain returned. He avows that this is the "best night I've passed for four months." The pain this morning does not compare with that of previous mornings. The current is repeated.

24th. Improvement is very marked. He has had no acute pain since date of last note—only a dull sensation in the limb. He walks now with comparative ease. A current of medium strength is employed to-day.

26th. Had slight pains last night, though now feels much better. A strong current.

30th. About well; a current of medium strength now used.

At this time our patient falls into other hands, and the applications are very mild and the notes very diffuse. The assistant who takes charge of the electrical room now fails to recognize the indications in this particular case, and the treatment for a while is thoroughly unsatisfactory. Yet despite these adverse circumstances it was observed, on the 3d, 7th and 9th of January, that he was still free from pain, unless it chanced to storm.

February 21, 1878. It is recorded that he feels very well, with the exception of an occasional pain about the ankle, and a little weakness of the limb. He did not call again, and on visiting his home February 3, 1879, I saw his sister, who reported that he was working all the while, was free from lameness and pain, and but for an occasional ache just before a storm, would scarcely know that he had ever had a sciatica.

CASE VI.—*Three months' standing; treatment interrupted by a complication; subsequently resumed and cure established; examination made fourteen months afterward.* On November 4, 1877, C. F., a cabinet maker by occupation, aged thirty years, came to the hospital with a history of pain in the distribution of the superior branches of the sciatic nerve of right side, dating from strain while lifting three months ago. The pains at first were trivial, and were confined to the lumbar and gluteal regions, only a small portion of the thigh being included. Three weeks ago, however, he was guilty of the same indiscretion, and the pains were aggravated; yet not suffi-

ciently so to prevent him from working. No treatment was adopted until December 4th, by which time the pain became so acute that he had to give up his position. He had likewise lost flesh rapidly. In this interval he had applied at another dispensary for relief, some form of electricity having been used without benefit. This morning a strong current for ten minutes brought about almost entire relief from the pain.

5th. Had no pain yesterday after leaving the electrical room, but after he had retired to bed the pain returned and lasted all night, subsiding about daybreak. This morning he complains of pain, though it is not so severe as on yesterday at same time. After the application to-day gets perfect relief.

6th. Not until two o'clock this morning did he have any pain at all, but at this hour it came on with such intensity that he had to arise and walk the floor till the paroxysm was over. This morning he was able to ride in a street car—something he has heretofore been unable to do, so sensitive was he to the jolting.

7th. During the day easy, but at night suffered a little—nothing, however, to compare with former nights.

8th. Rested well during the entire night.

14th. Has been treated with the current every morning since date of last note; and every morning for the past four days, between the hours of four and six, sharp attacks of pain have come on regularly, while during the day he has had occasional mild attacks. There is observed a swelling over the sacrum to the right, tender on pressure, but without extra heat. The current is not borne well on account of the hyperesthesia, and is discontinued, while a fly blister is ordered to the swelling already observed. The pain, it is likewise observed, has been mostly confined to this locality.

22d. The pain about the seat of the swelling has disappeared since the application of the blister, but it has continued along the thigh as usual. Galvanism is recommended, and is applied daily; when it is recorded on the 26th, no pain whatever—has worked every day since the 22d. 30th—No recurrence; discharged.

January 22, 1879. At my request the patient called for examination. I find him much stouter, free from any lameness, able to work every day, sleeping well every night, free from pain in hip or thigh; but when the weather changes he sometimes has a little pain over site of former swelling. Has not had the first symptom otherwise of a relapse.

The case just reported is of interest in that a possible connection is shown between the sciatica and the lesion over the sacrum. We see how this lesion, being of a mildly inflammatory character, was made worse by the galvanism, even though used, as some would claim, as a counter-irritant, while it was relieved by an undoubted counter-irritant; and further still how, when this was relieved, the sciatica persisted and yielded only to the strong current.

It is not my purpose to discuss the mode of action—that would be an endless task. Some there be who may claim that by applying the agent with such intensity, a counter-irritant effect is produced and not a galvanic. What matters it whether it be counter-irritant or sedative, so that the patient is cured and no injury is done. No man can appreciate more fully than do I, the necessity of caution in the use of electricity; and he who doubts can but refer to some remarks on this very subject, made in a paper on the “Paralysis of Potts’ Disease,” which I read at a meeting of the New York Neurological Society the early part of 1878, and published in the *Journal of Nervous and Mental Diseases* for April of the same year. What I am arguing for now is the judicious use of the currents; and it is judicious, I honestly believe, to use a strong current from a constant battery in cases of severe sciatica. In addition to facts which I have already placed on record, and facts which I am still to produce, I take pleasure in quoting from the late Dr. Anstie the following:

“More especially in sciatica it would really, with our present knowledge, be a decided neglect of duty were we to allow the disease to run any considerable length without giving the constant current a thorough trial.”*

Dr. Anstie, however, seemed to be afraid of a strong current, although on p. 262 he concedes that in neuralgia of the limbs a more powerful current is required—even twenty cells.

To still further illustrate the difference between the results which follow a notable counter-irritant and the strong galvanic current, two or three cases are introduced.

* Neuralgia, etc., N. L. 1872, p. 266.

CASE VII.—*Eight months' standing; cured by the actual cautery, and relapse at end of six months without apparent cause; cured again by galvanism, and no relapse at end of fifteen months.* H. H., a car conductor, aged twenty-nine years, who applied May 24, 1877, for the relief of sciatica of left side, furnished a typical history of the same running over a period of eight months. His idea as to the cause was that exposure incident to his vocation had induced the disease. His most severe attacks of pain occur during the night, and while he is very lame, he must keep at his post or leave his family to starve. The rumbling car, too, but aggravated his symptoms. I advised galvanism, but he could not leave his car long enough to call at the office for the application of this remedy. One afternoon, June 7th, he called and the actual cautery was applied at points along the region of pain. This was repeated a week later, and complete relief was afforded. He continued his duties as conductor, and no relapse occurred until six months later, when the pain returned with increased violence. He knew of no provocation. He managed to come in twice a week for the application of a strong current, and at the end of a fortnight, four sittings having been held, he had obtained perfect relief. Four months later he suffered from neuralgia of the anterior tibial, *right* side, and of the circumflex, *left* side. A cure was effected in both nerves by two or three applications of a strong current.

At my request he called February 5, 1879, and I find him free from a remnant even of his neuralgias. He has had no return at any time of pain in the sciatic, or in the other nerves. For nearly a year he has been a car driver, and his exposure to the weather is greater than it was formerly.

CASE VIII.—*Six months' standing; cure; relapse at end of ten months from exertion; later symptoms not severe enough for treatment.* February 25, 1878, J. C., a night watchman, aged twenty-seven years, applied at the out-door department for treatment. He suffered from an active sciatica, *right* side, which had been induced most likely by exposure in a manner the details of which I omit for lack of space. This occurred about six months ago. The pains were light at first, then gradually became more severe until he had to give up his occupation and resort to his bed. Here he had been for six weeks, when he hobbled into the office of the hospital, and he had been treated (so patient says) for hip disease. Suffice it to

say that, during this period in which he was confined to his bed, the suffering was very great. The acuteness began to wear off a little, and he was thus enabled to leave his chamber. The weather, I may remark in passing, exerted no influence on the disease, but standing provoked the symptoms. He is in great pain this morning, and can hardly remain quiet long enough for an examination. A strong current—the positive pole over the nerve at its exit, and the negative over distribution of the same—gives much relief.

March 5th. It is recorded that he has been receiving a strong current daily since the 25th ult., and each day reports himself as better than on the day preceding. He is so far relieved that he can return to his work with pleasure, and does not report himself again until April 22d, when it is recorded that during the past four weeks he has had almost entire relief, though within a day or two he has had a return of pain not severe in character. After a single sitting of ten minutes he obtained relief.

February 3, 1879, nearly ten months later, I visited him at his home, in order to acquaint myself with his present condition. I learned that from April to Thanksgiving Day in November, he had no pain or lameness whatever; that on that day he attempted to lift beyond his power, when he felt a sharp pain in the hip, and so severe was the shock that he fell to the ground. The old symptoms returned, though with nothing like the severity or the frequency of those which characterized the original attack. On examination, I found one inch atrophy of the thigh, and a tingling sensation in the distribution of some of the branches of the sciatica, as I pressed my finger over the trunk at its exit. His duties are such that he can not spare the time for treatment, especially as the annoyance is of such little moment.

In the seventh case, it will be seen that the most powerful of counter-irritants effected relief, yet the pains recurred in less than a half year, while the patient was exposed to less provocation than he was after he had been relieved by the galvanism. Now fifteen months have passed, and no relapse. In the eighth case a relapse occurred, but there was sufficient cause therefor; besides the symptoms are subsiding without treatment.

The next two cases were relieved—one cured in fact, and the other so much relieved that I am convinced a cure followed. I was likewise unable to ascertain the ultimate results, on account of wrong addresses.

CASE IX.—*Three years' standing; cure not fully established.* J. T., laboring man, aged forty years, had a strong current applied December 6, 1877, for the first time. The sciatica, left side, was of three years' standing, and the usual history was obtained. Relief followed the application.

8th. On the 6th was free from pain all day, but on the 7th had a light paroxysm on getting out of bed, and another at 4 P. M. Slept well both nights—a new experience for him. A strong current is repeated this morning.

10th. Reports himself as perfectly well. On rising from bed had a very light attack of pain, but had none yesterday.

12th. No pain on 10th, but on 11th had a severe paroxysm lasting about ten minutes, and this morning on rising had an ache or two, which soon passed off. Did much walking yesterday and this morning. Current still employed.

14th. More pain yesterday than usual; the weather inclement and changeable. Feels, however, much better than he did before the treatment was begun.

18th. Has suffered during the past few days at irregular intervals, though he has been quite actively engaged at manual labor. A mild current is used to-day.

20th. Has had only one attack of pain since last note, and this was about the knees and ankle. A current of medium strength this morning.

24th. Had a sharp attack yesterday at 7 P. M., but none since. Repeat the medium current.

31st. Complains of a little pain at knee, but none elsewhere.

The patient did not return again, and as he lived in Brooklyn, and had moved since the date of my last note, I did not succeed in tracing up the case. The sittings were too short, and to this I feel sure we can attribute our failure to achieve a perfect success.

SIX CASES OF DYSPAREUNIA.

BY A. F. KINNE, M. D.

I report the following cases, as instances of some of the various lesions which may occasion the above serious and sometimes distressing abnormality:

CASE I. I was called in July, 1858, by her husband, to see Mrs. E. K., aged thirty-six, and the mother of four children, on account of "a something growing" in the vaginal passage, which had come at length to interrupt sexual intercourse, and which they feared would prove to be of a malignant character. Upon exposing the parts I found, just within the passage, an encysted tumor, of the size of a large hickory-nut, in the recto-vaginal septum. It was evident that it could not be removed without producing a recto-vaginal fistula, for the sack, upon the vaginal side at least, had coalesced with the mucous membrane, and the tumor was becoming an abscess, except that its contents were not purulent. I therefore laid it well open, and after evacuating the contents rubbed the inner surface freely with lunar caustic. The cure was complete.

CASES II and III. In the winter of 1872, Mr. C. came to my office for advice in behalf of his second wife, whom he had recently married and with whom he had found it impossible to have sexual relations. Upon a careful examination of this case, under chloroform, no cause for the dyspareunia could be discovered. It seemed to be purely a neurosis; and relief was obtained by inserting the thumbs, back to back, and making forcible dilatation. I might have tried iodoform, or some other local application, in this case, but chloroform being necessary for a thorough physical examination of the case, the course which I took was probably the best.

The experience of this gentleman in his marital relations would seem to have been exceptionally trying. He stated that he had lived nine years with a former wife without ever having accomplished the sexual act. And it would seem that

a sensitive caruncle must have existed in the case of this wife, for at times she complained of great pain in urination and so forth. But the most remarkable point in this case was, that he had consulted a number of physicians, at different times during this long period, without obtaining any relief or satisfaction—a state of things which will be found to exist, I think, in connection with a very great proportion of these cases. Indeed, but for this circumstance I should hardly deem my own experience worth reporting. Vaginismus and dyspareunia are comparatively recent terms, and the time is within the memory of many of us, when nothing used to be said about the condition which they describe.

CASE IV. In February, 1875, I got a patient out of the hands of a “cancer doctor,” by showing her that her cancer was an irritable caruncle of the meatus urinarius; that it could be instantly killed and got rid of, without blood and without any considerable pain, by the actual cautery; and by explaining, a little in detail, that the parts around would be protected by a bit of wood, with a hole through it, of the shape and size of the tubercle; and that the morbid growth, though exquisitely painful to the touch of a feather even, would not be so to the cautery, for the reason that the iron, at a white heat, would instantly paralyze and kill the nerve proliferations, of which these growths are largely composed.* This patient, Mrs. W. W., twenty-three years old, had been married three years, but without sexual congress; began to suffer pain upon urinating soon after puberty; and during the ensuing years had consulted a number of physicians without relief and without having the real nature of her case explained. A single application of the cautery, as above indicated, produced satisfactory results.

CASE V. Mrs. F. Y., sixty-three years old and the mother of a family of adult children, sent for me in August, 1875. For a number of years she had felt an increasing pain upon micturition, which of late had become unendurable. She suf-

* Dr. John Reid, quoted in Barnes on Women, p. 766.

ferred some also when either walking or sitting, and from such examination as she herself could make feared that something was growing there. And her son, a friend of mine and a graduate of the Medical Department of Michigan University, without having made a physical examination, and without expressing an opinion, had advised her to give the case to me. For obvious reasons nothing was said of dyspareunia in this case; but upon exposing the parts, a caruncle was to be seen bulging from the meatus of the most sensitive kind. The first application of the heated iron in this case was partially a failure, and after two or three weeks the operation was repeated. The cauterizing bulb was "olive-shaped" as directed, when I think it should have been of *the size and shape* of the morbid growth to be touched.

CASE VI. On February 9, 1878, I was called by Mr. C. S. to see his wife, some twenty years of age and apparently in good health, who was about to miscarry in the fifth month. On the way, he remarked anxiously that he could not see how the case could be got along with, for the family physician, whose attendance could not just then be procured, had ascertained that there was almost no vaginal passage at all, and that for a number of weeks he had been trying to enlarge it by the frequent introduction of glass dilators.

"If there is no passage there," I remarked, "then I would like to inquire how it comes about that your wife is in the family way?" "If you can not answer that yourself," he replied, "I do not know who can. All I can say is that there is no passage there that I could ever find, and we have never had sexual connection at all."

Suspecting, however, that it after all might be a case of dyspareunia, I first gave chloroform, and then proceeded to make an examination. I found no difficulty in doing this; the parts were natural; there was no stenosis, and none had ever existed. In about half an hour I had the pleasure of astonishing these worthy people by presenting them the fetus, with the investing membranes still unbroken—the "human egg" entire.

Upon questioning this woman, "separate and apart from her husband," she confirmed his statement in every particular. She showed me the last and largest dilator that the doctor had introduced; it was an ordinary small-sized test-tube, some two inches long and three-eighths of an inch in diameter; and with every appearance of truthfulness she declared that these tubes were the only thing that had ever found entrance into the vagina.

Here then was an aggravated case of dyspareunia, for which at the time I could discover no cause; and as no thorough examination has ever been called for, I am led to conclude that it was a neurosis, and that the miscarriage has operated as a sufficient cure for it. At a subsequent interview, the husband admitted that there had been "fooling" between them; and to this kind of performance, whatever it may be, the origin of the pregnancy will have to be traced.

I made a verbal report of the fifth case before the Washtenow County Medical Society, and the discussion which followed disclosed the existence, among distinguished men, of a difference of opinion as to the treatment most appropriate for some of these cases. Dr. Dunster seemed to favor transfixing the base of the tumor with a tenaculum, and then cutting away both together; and, in support of this view, referred to the practice of the New York Hospitals; while the late Dr. Sager thought the weight of authority was in favor of the cautery, actual or galvanic, and especially as in many cases, if not in most, some form of cautery must follow the scissors for the purpose of arresting the hemorrhage. And I can not resist the impression that there may be an unfounded presumption at the bottom of this (one in which the patient, unless she is instructed beforehand, is likely to have a lively share), to-wit, that to a part so extremely sensitive as most of these growths are, the cautery must be much more painful than it is when applied elsewhere—to the stump, for instance, after the caruncle is removed,—while the truth, as above stated, is exactly the reverse of this.

FOREIGN CORRESPONDENCE—OUR LONDON LETTER.

LONDON, February 10, 1879.

MY DEAR YANDELL: We have just passed through what is called a good old-fashioned winter, and most of us are amply satisfied, and quite content to have modern winters for the rest of our natural lifetime. What betwixt the villainous weather rendering traveling very disagreeable, the tightness of money, the paralysis of trade, chiefly due to an imbecile government, and a general state of all being wrong "somehow," the consultants of London are at low water for fees. Each man looks the other in the face with a doubtful expression, and asks "How's practice?" I have not found the man lately who has ventured a cheerful response to that pertinent question. We are too doleful to think the question any longer *im*-pertinent, and are trusting that the patients will turn out again when the weather improves. It is quite encouraging to see such confiding trust in providence on the part of a profession usually charged with a lack of faith.

The most interesting medical matter which has been discussed of late has been the subject of Epilepsy, the diagnosis of which formed the subject-matter of the Harveian Lectures delivered by Dr. Hughlings Jackson. As may be supposed these lectures were well attended, and the lecturer handled the matter with his wonted clearness and lucidity. He commenced by pointing out that diseases are departures from healthy states, but for convenience we arrange and classify them according as they approach certain types. He said he should consider epilepsies on the hypothesis that the paroxysm of each is dependent on a sudden temporary discharge of some highly unstable region of the cerebral cortex. Epilepsy is then a "discharging lesion." The discharge from these highly unstable cells of the cortex cerebri is often very localized. Secondary discharges may be set up by the currents developed by the primitive discharge. The "discharging lesion" may be likened to a fulminate which overcomes

the resistance of less unstable compounds. He showed how much the researches of Ferrier and of Hitzig had added to our acquaintance with epilepsy, and how the discharges which were caused by the application of the faradic current to certain portions of the cortex cerebri caused muscular movements allied to epileptic convulsions. Epilepsy is often preceded by a crude sensation of taste, sight, hearing, smell, or of the ordinary sense. The extension of currents, and with it the amount of convulsion, depends upon the resistance each current has to overcome in the rest of the cerebral cortex. But patients do not come to us complaining of a "discharging lesion;" they come complaining that they have had "a bad fit," or that they "occasionally lose themselves for a moment." He proposed to regard the subject from its clinical rather than its scientific aspect. He would divide the subject into, first, epilepsy proper; and, second, epileptic seizures. In the first consciousness is lost at first, or very soon; in the latter, late on or not at all. The loss of consciousness is the measure of the blow received from the local discharge affecting the rest of the brain. In the first, convulsion is rapidly developed; in the latter, it begins very locally on one side and spreads gradually. In the last there is increased instability of cells, with occasional excessive liberations of energy. In the last, then, there is increased nutrition which leads to the discharge. How this increased nutrition is brought about we do not yet know; in some cases it is excited by a tumor. Epilepsy proper is rarely caused by gross organic disease; epileptic seizures are often so caused, and especially by syphilitic disease. Such seizures, without loss of consciousness, point to gross organic disease.

Taking epilepsy proper, we may say that it is a paroxysmal loss of consciousness, with more or less spasm of muscle. The amount of spasm may be very varied. In one case a man used to show his twitching hand to his fellow-workmen, "as a curiosity," before he had more severe seizures. The correspondence, however, is not betwixt the affection of consciousness and the peripheral effects of the discharge; there

may be a discharge strong enough to abolish consciousness, and yet not be strong enough to produce any, or very slight, peripheral effects. Sometimes the peripheral effect is confined to the facial muscles, and a vacant or startled look is the only outward visible sign of the epileptic attack. The subjective sensation may be only a giddiness or a reverie. Such are the characters of the *petit mal*. Such "little fits" may alternate, or be mixed up with more severe fits. There is then partial or complete loss of consciousness; the patient may be but imperfectly conscious, or, in his own language, "confused." The effect of the discharge may be to cause secretion, as a free flow of saliva; or it may affect the bladder, and the patient passes urine involuntarily. "During excessive discharges of the very highest centers, nothing like normal mental states arise: time is required for consciousness; consciousness ceases during the rapid and excessive discharges of vast numbers of the nervous arrangements, which are the substrata of consciousness. The psychical states arising during an epileptic discharge of the highest centers are only crude sensations, such as vertigo or epigastric sensation."

The peripheral effects of epileptic discharges may be roughly divided into three forms:—First, affection of parts serving in animal functions, as visible movements, crude sensations, as a "ball of fire," or a stench, or vertigo. Second, affection of parts serving in organic functions, as a flow of saliva, an intermitting pulse, or an eructation, or a sensation of dying, or nausea. Third, common to both animal and organic, as a suspension of respiration.

After this followed a consideration of the relation of consciousness to certain physical conditions of the greatest interest, but which can not possibly be abstracted. The gist of it is that the different parts of the body are represented in the "organ of mind"—the liver as much as the hand. Thus there is a visceral aura, as well as those starting from the thumb or toe. Not only so, but there are more permanent mental conditions in different diseases, as the *spes phthisica*, and the melancholia of abdominal disease. He goes on to

say:—"I doubt not that when there is a discharging lesion in a cerebral center, representing especially the stomach, when the patient at the outset of his seizure has a sensation of nausea, that center being in an unstable condition is easily worried into discharging when the digestion is overworked."

Involuntary discharges of urine or of feces, are exceedingly valuable helps to the diagnosis of epilepsy, especially in its slighter forms. If a child, and still more an adult, pass urine in bed, epilepsy should be carefully looked for. If passage of urine occur during a so-called "faint" or "giddy attack," in the daytime, epilepsy is almost certain. That the manifestations should be very slight, or at distant intervals, the person in the meantime appearing in first-rate health, does not militate against the diagnosis of epilepsy.

As to its pathology, comes the great question,—“Is the change primarily arterial, and secondarily nervous; or is it a change beginning, first of all, in the nerve cell? There are many nervous diseases which are not nervous at all, in the sense that the nervous elements are the first to go wrong. In most cases of nervous diseases of which there is an anatomy, the nervous elements are quite innocent; they suffer because their arteries are blocked up or break—because tumors grow in their connective tissue,” etc.

The question of the hereditariness of epilepsy was next reviewed. That relatives have died of apoplexy from cerebral hemorrhage is simply no evidence of a patient's inheriting a disease of the nervous system. Neither does the fact that chorea, neuralgia, or even epilepsy proper, have occurred in the patient's family, make it possible to say that epilepsy is inherited, “or the tendency thereto, in the sense that they point to changes *beginning* in nervous elements. The occurrence of these neuroses can not be adduced as evidence that epilepsy is a disease primarily nervous.”

In the third lecture, Dr. Jackson spoke of the mental condition during epilepsy. “There is a double mental state—a negative and a positive element together. A patient seized with a slight fit suddenly becomes vague as to his surround-

ings, and at the very same time, or in instant sequence, he has a 'dreamy' feeling, often of some apparently former surroundings. This double mental state helps the diagnosis of slight seizures greatly." With the "dreamy" state there may be action; there is "an epileptic somnambulism" as well as "an epileptic dream." An epileptic, after a slight fit, took his boots off in church; another began to undress on a wharf, and was stopped by his fellow-workmen when he had got off one leg of his trowsers. There may, however, be actions more elaborate. "The 'dreamy' state may be followed by actions; the patient remembers his dream, but knows nothing of his actions." The positive mental element may take the form of a reminiscence: one patient said, "It seems as if I went back to all that had occurred in my childhood, as if I see everything, but so quick and soon gone that I can not describe it." Where epilepsy originates in terror, in each succeeding fit the patient goes through again the painful circumstances or the frightful scenes which produced the first attack.

Then there are post-epileptic actions: The patient acts nearly normally. For example, a patient seized with a slight fit when about to wash himself, twirls his hands about the basin; or going up-stairs to make slight alterations in his dress, has a slight fit and undresses; or he walks quietly the wrong road, and finds himself in some strange place; or has a sort of coördinated convulsion, lies on the floor or sprawls about; or, if a woman, kicks about and shouts or laughs—a condition often taken for hysteria; or the patient is up and about, and violently maniacal.

The two following illustrations of post-epileptic conditions were not related by Dr. Jackson in his lectures, but he told them to me some little time ago; and as they are instructive, they may be related here. In one case a gentleman, going with his wife to visit a cathedral, had a slight fit, being subject to fits, and all the outward evidence of it was his remark, "How much shall we have to give the housekeeper?" The impression left on his mind after the fit was that the cathedral was a private mansion. The second may some day come to

have a distinct medico-legal value. A medical man, who was subject to the *petit mal*, was shown into a lady's room, whom he was attending professionally, she being in labor. He had a slight fit, after which he began undressing himself, under the impression that he was in a lady's bedroom for a totally different purpose.

One man was subject to slight as well as more severe fits. He becomes very violent sometimes—breaks articles of furniture, etc. “He remembers nothing of these actions. In or after one of his slighter attacks, he was supposed by the foreman to be intoxicated; and on another occasion was accused of stealing, because in his insensible state he took a fellow-workman's jacket.”

He concludes:—“In no case can we suppose the ‘dreamy state’ to be a symptom of the same order as the crude sensation, which may go along with it; for the crude sensation attends the epileptic discharge, the dreamy state is infinitely too elaborate to have such causation. It is supposed to be owing to ‘loss of control,’ and possibly may depend on rise in activity of the opposite cerebral hemisphere.”

Such, then, is the present and most advanced position of our knowledge of epilepsy and epileptic conditions. Let me add that Dr. Hughlings Jackson is in accord with Brown-Séquard that iron does not agree well with epileptics.

Obstruction of the bowels is a matter exciting much interest here at the present time. Dr. Clifford Allbutt writes:—“When a doctor is called to a case of obstruction of the bowels, he has at once to determine, if possible, the process, the site, and the nature of the block. As regards the process of it, he will try to decide whether the obstruction be due first to enteritis, plugging, intussusception, hernia or stricture. He may then decide where the disturbance lies, and finally of what nature it is. The enteritis may be primary, secondary, or tubercular, etc. Plugging may be fecal, polypoid, due to gall-stone, and so forth, and may be accompanied by enteritis. Intussusception may be strangulated, or simply incarcerated; and is probably always accompanied by inflammation, simple

purulent or gangrenous. Hernia may be in the usual internal or external sites; or may be due to other accidental twisting or snaring of the bowel, and is sure to be accompanied by some degree of inflammation. Finally, stricture may be simple, malignant, or due to pressure from without; and is less frequently accompanied by inflammation than the preceding events. In dealing with obstruction the lesson I am never tired of enforcing in all cases is, that the therapeutics depend upon the diagnosis. Make diagnosis accurate and complete, and treatment will come of itself. Never mind the name of the disease, but make out precisely what state of things is before you in the individual case, and you will rarely be at a loss for treatment," is his advice to students.

Dr. Allbutt then proceeded to draw a parallel betwixt the careful treatment of hernia and the reckless manner in which purgatives are given in many cases of internal obstruction. "Is it not," he says, "our business to soothe with fomentations and the like; and, above all, to put the patient fully under opiates?" As to the treatment of internal obstructions, he says:—"To whip a dog in a leash is to strangle him; he may slip his collar if he be left to himself. It is not by agonized writhings that the bowel will get loose, but by quiet subsidence if at all. But if those means fail the abdomen must be opened, as it must be in strangulated hernia; in the latter case, operation gives the patient his only chance."

Mr. Pridgen Teale then follows with an account of "Exploration of the Abdomen in Obstruction of the Bowel." He regards this as justifiable on "two cardinal grounds—first, the mere opening of the peritoneal cavity is not necessarily a dangerous operation; second, there are many cases of obstruction of the bowels which must prove fatal unless relief can be given, which can only be rightly directed by means of exploration of the abdominal cavity."

His conclusions on one illustrative case are as follows:

"1. The opening of the abdominal cavity did not shorten life, but actually prolonged it. 2. Could the operation have

been done twelve hours earlier, the probability is that the bowel would have recovered, and that the patient might have lived. 3. The operation did not cause peritonitis. 4. When we open the body for obstruction of the bowel, even if the condition causing it be enteritis or peritonitis, we may attain the greatest amount of benefit if we boldly aim at emptying the bowels, as far as possible, of flatus and fluid, by effectual openings—*i. e.*, with the scalpel—so as to replace the bowels *perfectly flaccid and free from gas or tension*. 5. If the bowels be mechanically emptied of gas and rendered flaccid, the gas is not reformed rapidly, and meantime the circulation in the bowels, being relieved from pressure, has time to recover itself.” Mr. Teale is a very cautious surgeon, and is not given to rash procedure.

Apropos of opening the abdominal cavity, let me tell a story which is now in circulation here. A lady went to a celebrated ovariologist, who successfully operated upon her, removing an ovarian tumor. Four or five weeks later the lady went to an equally celebrated lithotomist, with symptoms of stone in the bladder: the sound detected a hard substance. The lady preferred being operated on again by the ovariologist. The solid body was removed from the bladder. The ovariologist took it to the lithotomist, saying, “It is not a stone!” “Then it is a surgical instrument!” was the confident reply. It was a *pair of forceps*. Unfortunately the lady did not survive the second operation. More may be heard of this case, as the lady promised her doctor, who took her to the ovariologist in the first place, that if she survived the operation she would marry him. The lady was rich, and her disappointed suitor is threatening legal vengeance, in the shape of damages.

J. M. F.

Reviews.

The Principles and Practice of Surgery—Being a Treatise on Surgical Diseases and Injuries. By D. HAYES AGNEW, M. D., LL. D., Professor of Surgery in the Medical Department of the University of Pennsylvania. Profusely illustrated. In two volumes. Volume I. Philadelphia: J. B. Lippincott and Co. London: 16 Southampton Street, Covent Garden. 1878.

This is the most ambitious surgery which has been put forth in this country by an American author. The present volume, which is its first part only, contains 1060 pages of royal octavo, closely printed. The subjects treated are Surgical Diagnosis, Inflammation, Injuries of the Head, Injuries of the Chest and Abdomen, Wounds of the Extremities, Diseases of the Abdomen, Diseases and Injuries of the Blood Vessels, Ligation of Arteries, Surgical Dressings, and Diseases and Injuries of the Osseous System. Should the remaining chapters be cast in the gigantic scale adopted for some of these already given, it is not probable that a second volume will encompass them. In these modern days of specialties, such an undertaking as this work of Professor Agnew's is somewhat unique. When so much is to be embraced, not cursorily in the form of the text-book, but critically and exhaustively, the tendency has been to a division of labor, and the committal of the work to experts in the several fields. In such manner have the various encyclopedias, dictionaries, and systems been born. But we do not think it by any means proven, by the quality of much of the work which has been thus accomplished, that it is the only method of reaching perfection. Holmes's System is a most unequal compound of emanations from masters and men, and certainly not a more creditable picture of British surgery than that presented by Erichsen, who borrows but a

single chapter from Streatfield; and the immense satisfaction which the cyclopedic volumes of Professor Gross continue to give, is evidence that one great mind may still control the literature of surgery.

Upon the subjects treated in the volume before us, Professor Agnew certainly had no need for aid. And we feel quite certain, in those to be presented hereafter, that what with personal experience and native talent to appreciate the work of others, he will, should he live to finish his volumes, give to the world a surgery of great value. Indeed Professor Agnew is one of the very few men from whom we think another surgery should have been demanded in these days of facile book-making. We might have been sure beforehand that what he had to say was worthy of record. His experience is ripe, and his industry as a student, teacher and practitioner has been marvellous. Added to these the directness of his mental vision has given him exceedingly plain views of truth, and the conscientiousness of his nature has made his testimony exact. Certainly the first impressions one gets from perusal of the pages we have under review is the honesty with which the subjects they contain are set forth, and the practical value of the knowledge they contain. Prof. Agnew's style is always clear; he is never affected: only now and then, at long intervals, he indulges in illustrations which might be considered strained. He is always interesting.

The introductory chapter on surgical diagnosis is particularly well considered. It might have been interpolated anywhere, and perhaps occupies this leading position from the rank which Prof. Agnew gives to diagnosis. The following extract will denote the author's wisdom and care:

"A third class of cases will be encountered, so obscure and unpronounced as to baffle the keenest analysis. Whenever, therefore, the surgeon is compelled to proceed on a data of probabilities, it is in most instances a good rule to *wait*. Often in my professional life, when in a maze of doubt and uncertainty, have I imitated with the happiest results the storm-beset mariner, who, in the darkness of the night and nearing an unknown coast, casts anchor and waits for the day. A few hours even of delay may open a crevice in a hitherto hidden case of

disease, which will be sufficient to illuminate its obscurity and resolve all uncertainties."

The chapter on inflammation is full, containing one hundred and twenty pages. The history of the advance made in our knowledge of the process is remarkably well done, as indeed are all the historical and statistical accounts of the work. The pathological accounts are well up to, but do not in any particular surpass their models. In the treatment of special forms, Martin's elastic bandage might have been included among the more worthy methods of combating ulcers.

The chapter on wounds contains one hundred pages. The author gives decided preference to catgut ligatures when they have been properly prepared, say by ninety days' soaking in oil, and is a convert to the antiseptic method. While he has not obtained results so decided as those of Professor Lister, his "success has been so much more satisfactory than that obtained by the ordinary plans, that to decline the use of antiseptic dressings would be to withhold from the patient the benefit of one of the most important resources of the art." In the original lectures of Mr. Chiene, the first of which appears in the current number of the *American Practitioner*, the subject of antiseptics will have ample consideration.

The all-important subject of "shock" has only been incidentally alluded to. Injuries of the head occupy seventy-five pages, and comprise wounds of the face and neck also. The discussion of brain injuries is not so extensive, or indeed so satisfactory as we might have expected, though convenient rules, which embrace we think safe practice, have been presented. Mr. Erichsen's treatment of the subject, especially in his detached lectures, is much more philosophic and should have been drawn upon more largely.

Injuries of the chest and abdomen, especially the former, have received a fair share of consideration, and the lessons of the civil war have been well embodied. The chapter on wounds of the extremities is not worthy of its companionship. Certainly in a work where space seems to be no particular ob-

ject, five pages was not enough to devote to accidents which call for so much of the surgeon's work.

Diseases of the abdomen occupy one hundred and twenty pages. Rectal diseases and the hernias are included. Laparotomy in intestinal obstruction is advised after fruitlessly "persevering for several days in the use of the usual remedies." We should have liked to have seen our author take stand for earlier operative interference in this class of cases. Colotomy in malignant stricture is urged. The consideration of hernia is, we submit, not up to the author's mark, either in pathology or treatment. In the taxis, valuable auxiliaries are either not emphasized or are wholly omitted.

Chapter IX is on surgical dressings, and appears in this situation without any reference, that we can discover, to order; nor are we much pleased with it. Possibly our prejudices against the ever-recurring plates which seem destined to appear in every Philadelphia work on dressings, is such that we may be unfair in our judgment; but we are greatly mistaken if several of the bandages figured could be applied as depicted or described. Of most of the other illustrations which are given in such profusion throughout the work, we can not withhold our praise. They are simply admirable.

Chapter VIII is on diseases and injuries of the blood vessels. It contains one hundred and twelve pages, and is followed by one of sixty pages on the ligation of the vessels. The consideration of aneurism is one of the strongest features in Professor Agnew's work; and no where has there been given a better account of ligation than in his chapter upon the subject.

The concluding chapter of the book is that on which Professor Agnew has seemingly, we should say, exhibited his best quality. It is on "Injuries and Diseases of the Osseous System," and contains three hundred and twenty-five pages, nearly three hundred of which are taken up with the consideration of fractures. The tables of ununited fractures, compiled for the author by Dr. F. Muhlenburg, occupy fifty pages

of the text, and embrace six hundred and eighty cases, illustrating every treatment. The tables of fractures treated in the Pennsylvania Hospital, from 1850 to 1874, are also introduced. These tables are apt to strike one as rather too much of a good thing in a work of this character, but they certainly render the book indispensable for reference when the subject-matter of fractures is to be thoroughly considered. Nothing novel in the treatment of fracture is introduced. All the old machinery, however, is carefully preserved and presented. This was to be expected, however, as the author is not an advocate for the immediate application of the plaster-of-paris apparatus—waits as usual “for swelling to subside” in fractures of the leg, and would not recommend its use at all in fractures of the thigh. When the plaster apparatus is used, as it is in the North, upon the idea that it keeps up forced extension, and must therefore grasp the parts, we can enter even more heartily than does Professor Agnew in any doubt or condemnation that may be placed upon it. When put on after the manner of Erichsen, as it is in the latter-day surgery of Kentucky and the South—over an ample layer of cotton batting—we consider its immediate application called for in every fracture of the lower extremity which does not demand amputation, whatever its situation; and we think the dressing thus applied is all that can be wished for in the treatment of the injuries named. Why, therefore, “long splints” and the scores of apparatus from the fathers should cumber the earth, we can no more imagine than why the stage-coach of the past should take the place of the railways and locomotives of the present.

But no details that we could compress in the space at our disposal would do justice to Professor Agnew's volume. Its hearty reception by the profession is a foregone conclusion. So interesting and instructive a work, such a useful help and so safe a guide, can not but meet with the warmest of welcomes, and wear through a long companionship. Certainly our best wishes and recommendations follow it.

Physiology—Preliminary Course of Lectures. By JAMES T. WHITAKER, M. A., M. D., Professor of Physiology and Clinical Medicine in the Medical College of Ohio; Lecturer on Clinical Medicine at the Good Samaritan Hospital; Member of the Cincinnati Academy of Medicine, and the Cincinnati Society of Natural History.

On the Influence of Physiology upon Practice; On the Conservation of Force; On the Origin of Life, and the Evolution of its Forms; and on Protoplasm, Bone, Muscle, Nerve and Blood. Illustrated. Cincinnati: Chancy R. Murray. 1879.

This is a long title and indicative; sets out the general subject, then names the particular theme of each of the twelve lectures. All the lectures treat of affairs of science valuable to the physician as knowledge, and some of them deal with subjects to understand which is an indispensable requirement of a competent practitioner of medicine.

The first lecture is an agreeable running commentary on ancient physiology, with its imperfections and superstitions, and how it gradually developed into the present status of the science, with pen pictures of some prominent physiologists of the past and their associations and surroundings. The next four lectures are a kind of *index rerum* in the nebular theory of the solar system, the doctrine of evolution, the descent of man, the origin of species, the survival of the fittest, and natural, artificial and sexual selection, with well digested notices of some of the eminent men and their measures prominently associated with the development of these scientific problems.

Chapter VI, under the caption "protoplasm and its properties," begins the discussion of subjects more frequently treated of as a necessary part of human physiology; and chapter VII continues the same subject, and the history of the cell doctrine and structure and chemistry of cells, is concisely but plainly and satisfactorily given. "Bone and its properties" has consideration in chapter VIII, and "muscle and its properties" is presented in the next two chapters. Chapter XI is devoted to "nerve and its properties;" and the book concludes with chapter XII, on "blood and its properties."

These lectures constitute the preliminary course in the Medi-

cal College of Ohio, and the preface announces that they are fashioned to fit the comprehension of first course students. From another source one learns that the preliminary course in this college is delivered in September, and attendance on it is earnestly recommended to all students, but is not obligatory on any. If the substance of these lectures is omitted from the regular course, all students who fail to attend in September must have quite a hiatus in their physiological instruction. One can be but apprehensive that not all first course students have had the necessary preceding education to ingest and assimilate the rich mental food tendered them by Dr. Whitaker in these lectures. Indeed, unless last course students are more learned than their predecessors of a few years back, under similar circumstances, it is quite certain that many a young graduate will proudly bear his diploma, and still not have a moiety of the physiological lore implied in these lectures, to say nothing of their cosmogonical teachings; *albeit*, there is not therein a point stated nor hinted, but that should be fully commanded by every disciple of Esculapius before he is admitted to the ranks of the active practicing profession.

Human physiology is the normal activity of the human frame; pathology is the abnormal activity of the same. It would seem but the reasonable duty of every doctor to understand its physiology before he undertakes to correct its pathology; and yet how often do we find the professional neophyte struggling to hold in his memory formulas in medicine and proceedings in surgery, to the exclusion of the physiological rationale that underlies both.

All well wishers of doctors and their clients owe Dr. Whitaker thanks for the elevated ideas of physiology and its mission inculcated in these lectures; for although he presents them as only the introduction to the great science, still we can feel assured that when an architect fashions and finishes a portal in beauty and appropriateness, the temple to which it leads has been conceived and constructed in harmonious and symmetrical grandeur.

J. F. H.

Cyclopædia of the Practice of Medicine. Edited by Dr. H. VON ZIEMSEN. Vol. XV. Diseases of the Kidney. 8vo., 796 pp. New York: William Wood and Co.

Few medical publications in modern times have evoked such conflicting criticism as Ziemssen's Cyclopædia. The magnitude of the enterprise, the great number of contributors, the bulk of the work, forming quite a library in itself, and finally its costliness, are elements which have all been dwelt upon by different critics. The advisability of publishing cyclopedic work (at such high figure) of a science so rapidly progressing as medicine, is a question each student must settle for himself. It can be said with truth that in this work the English and American reader will find an immense storehouse of learning, which without it would have been inaccessible to him. The experience and views of the leading German writers are here laid before him; and whether his own opinions correspond with theirs or not, he becomes enriched by their experience, and, as a well informed physician, he ought to be familiar with their views. To the scholarly and studious physician, Ziemssen's Cyclopædia is invaluable. To that professional fraud, "the busy practitioner," it is useless; the latter never reads anything of heavier caliber than Braithwaite's Retrospect, eschews all articles longer than half a page, detests pathology, and *studies* not at all. "The busy practitioner" never will spend money on mere books; when he wants to see what "the books" say, he usually borrows them from his more studious neighbors, and sometimes is "too busy" to return them.

The present volume (No. XV), is the joint product of Professors Bartels of Kiel and Ebstein of Göttingen. The name of the former is not unknown to readers of German medical literature; nor is this his first contribution to renal pathology.

The work is divided into two parts—the Structural Diseases of the Kidney, and General Symptoms of Renal Affections. Of this part Professor Bartels is the author; it includes acute parenchymatous nephritis, chronic parenchymatous nephritis,

renal cirrhosis, amyloid degeneration, etc. It is a thorough and comprehensive exposé of the present knowledge of renal pathology and therapeutics; but it is surprising that no mention is made of the use of jaborandi in the treatment of various forms of renal disease. This remedy is now so firmly established in the confidence of the profession, that it must be considered a great oversight in both author and editor to omit any notice of it.

The second part is by Prof. Ebstein, and includes tumors, certain forms of degeneration, and diseases of the pelves of the kidney and of the ureters, parasites and anomalies in the form, position and number of the kidneys. The chapters on hydronephrosis and on cystic degeneration of the kidneys, are remarkable for their brevity and incompleteness; the author is apparently not aware of all that has recently been published on these subjects, both as to clinical history and pathology. The second part of the work is not equal to the first, although it must be considered quite valuable.

The translators deserve great praise for the manner in which they have executed so laborious and difficult a task. Translations of foreign works into our language are numerous enough, but it is as pleasant as it is rare to find an accurate reproduction of the author's ideas expressed in idiomatic and even moderately elegant English. The translators of Ziemssen's *Cyclopædia* have committed a smaller number of those sins so common to their craft, that they have earned the thanks of much abused and long suffering readers.

J. A. O.

Health Primers—

1. Exercise and Training. By C. H. RALFE, M. D.
 2. Alcohol—Its Use and Abuse. By W. S. GREENFIELD, M. D.
 3. The House and its Surroundings. Author not named.
 4. Premature Death—Its Prevention or Promotion. Author not named.
- New York: D. Appleton and Co. 96 pages in each.

These little books are not written for doctors, although they are written by doctors chiefly, and most doctors may

read them with profit. The preface to the American edition has this declaration:—"Though it is of the greatest importance that books upon health should be in the highest degree trustworthy, it is notorious that most of the cheap and popular kind are the mere crude compilations of incompetent persons, and are often misleading and injurious. Impressed by these considerations, several eminent medical and scientific men of London have combined to prepare a series of Health Primers, of a character that shall be entitled to the fullest public confidence. They are to be brief, simple, and elementary in statement, and they will be filled with substantial and useful information, suitable for grown-up people. Each primer will be written by a gentleman specially competent to treat his subject; while the choice of topics and the critical supervision of the books will be in the hands of an able and responsible committee."

To this may be added that the four numbers of the series under notice fully carry out the promise of the preface; even the use and abuse of alcohol is so fairly and so clearly presented, that we may reasonably hope that all minds not clouded by stimulants nor warped by fanaticism will find it placing alcohol in its true position among foods and medicaments. This is doing a good and a wanted work. The other primers are as well written as the one treating of alcohol, and the author of each has put the substance of volumes in these few pages in such manner that it shall be available for the practical every-day use of grown-up intelligent persons.

A list of names of contributors and of the editors is printed in each volume; and they are the names of skilled and eminent men—a guarantee that the whole series of Health Primers will maintain the promise of the initial four numbers. Doctors can do a valuable service by procuring these primers and using their contents as texts for lay sermons to a needy constituency.

J. F. H.

Clinic of the Month.

TREATMENT OF ASTHMA.—Dr. J. C. Thorowgood, *Lancet*, February 15, writes thus:

Among remedial agents employed during a bad paroxysm of asthma, few are more universally known and employed than the smoke of burning nitre-paper. Ordinary blotting-paper is soaked in a strong solution of nitrate of potash, and, when dry, is burnt till the patient's room is filled with a cloud of nitrous fume, and often it is not till the room is thus filled with smoke that the sufferer finds relief. As long ago as 1846 we find this use of nitre-paper highly extolled in the *Medical Gazette*; and in the *Lancet*, April 5, 1845, we learn how a friend of Mr. Harrison's tried burning paper that had been soaked in saturated solution of nitrate of potash, and felt the inhaled smoke to clear the passages and open the air-tubes, and so conduce to free and easy respiration. Though some amount of emphysema and bronchitis does not invalidate the action of the nitrous fume, yet it is in the spasmodic sudden attacks of breath stoppage where its curative action is most marked. The chemical constituents of the fume have been examined by M. Vohl, and he found the nitrous vapor to contain cyanogen, carbonic acid, nitrogen, ammonia, and nitrite of potash. To the ammonia and nitrite of potash the anti-spasmodic property of the fume is attributed. Noticing that the constituents of the nitrous vapor are closely allied to some of the adventitious matters found in the close air of towns, I went over Salter's table of two hundred and twenty-three asthmatics to see if I could discover that those persons who are set down in the table as being notably relieved by the inhalation of the nitrous vapor were identical with those to whom town air proved so beneficial. I found that of twenty-

one who are said to have been greatly benefited by the air of London, there were nine to whom the nitre-paper was of marked service. Two, who are reported as cured by the London air, found nitre-paper inhalations more serviceable than anything else. One patient, whose sufferings were intensified in London, reports that nitre-paper seemed to do harm rather than good. Probably it is to the ammonia and carbonic acid gas that we may attribute the antispasmodic action of the burning paper. It has been shown by Trousseau how useful the inhalation of diluted ammonia can be in asthma, and Salter records a case where asthmatic spasm was at once stopped by breathing the vapor of diluted ammonia. The fact that the emanation from certain gas products is reputed good against the convulsion of whooping-cough, and that an asthmatical sea-captain could always breathe with facility when conveying a cargo of guano, are additional proofs of the antispasmodic action of ammoniacal vapor.

Among internal medicines that are good against spasmodic asthma, even when some degree of chronic bronchitis coexists, a high place should be given to the arseniate of soda. In a commencing dose of one-twentieth of a grain, either in pill or solution, this salt has a great power of promoting respiratory action, and appears, moreover, to act as a tonic to the system, for I have noticed patients to gain appetite and weight during its administration. The Bourboule water, so beneficial as a drink for those subject to asthma, apparently owes its efficacy to a trace of arseniate of soda in its composition. Arsenic smoking, by means of cigarettes containing from a quarter to half a grain of arseniate, is very comforting to those who suffer from hay asthma, or from ordinary spasmodic asthma, provided no feverishness of system or inflammatory action be going on. Dr. Wilks told me some time ago of a former patient of his at Guy's Hospital, who, in his trade as a bird-stuffer, used much white arsenic. This man was asthmatical and a smoker, and, when taken with one of his breath attacks, he usually added some of his white arsenic to the contents of his pipe, and speedily found relief.

Lately the iodide of ethyl has been employed as an inhalation in the treatment of asthma. Pure iodide of ethyl is colorless, but, after a while, it is apt to acquire a brown tinge, if exposed to the light, from the liberation of free iodine. Dr. Andrew and I have used this preparation in a few cases in the Victoria Park Hospital, and with beneficial results. In one case under my care a young woman had an asthmatic seizure every morning at four o'clock of some severity, but was eased much by the use of strong coffee. We gave her for a week ten drops of the iodide of ethyl on lint three times a day for inhalation, and at the end of a week she had lost her cough as well as her asthmatic attacks, nor did they show any sign of returning during the remaining three weeks of her stay in the hospital. My clinical assistant, Mr. McDonald, was able to detect iodine by the starch-test in the urine and expectoration of those who were inhaling the iodide of ethyl. In two cases recently I have observed excellent effects follow on the employment of the citrate of caffeine. One patient was an eminent medical practitioner in a large town in the north. He had suffered severely from paroxysmal asthma, and the utter failure of a list of approved inhalations and medicines (far too long to be here enumerated) was most distressing. Four grains of citrate of caffeine produced an undue degree of wakefulness, but one grain, taken regularly at bedtime, had a most happy effect indeed. So far as we can at present judge, it appears to have been really curative of the asthma. The last report says—" *Pari passu* with the asthma my cough and expectoration have gone, and I now have next to none of either." In another case, a highly informed and observant patient of Dr. Kingsford's, who had found much benefit from the inhalation of iodide of ethyl for an asthma and bronchitis of twenty years' standing, tried the citrate of caffeine in two grain doses, every afternoon for a fortnight, without any marked result. One day, however, being sadly worn out by a protracted attack of bronchial spasm which had lasted for eight hours, this patient took four grains of citrate of caffeine in coffee, with the effect of obtaining immediate

relief to the spasm, followed by three hours' quiet sleep in his chair. The citrate of caffeine appears to allay the abnormal excitability of the nerve-centers, and then repose ensues as a natural result.

SALICYLATE OF SODA IN RHEUMATISM.—The following are the conclusions by Marrot—*Archives Générales de Médecine*, February—as to the action of salicylate of soda in rheumatism:

1. During the course of acute articular rheumatism, there is a notable diminution in the quantity of urine, the proportion of uric acid increasing, and this increase is not explained by the lessened urine,—it is an absolute increase.

2. In cases of acute articular rheumatism left without treatment, the cure is characterized by a notable increase, during some days, of the quantity of urine, and by the return of uric acid and of the urea to the normal proportion.

3. Salicylate of soda given early in acute articular rheumatism, in some way hastens this natural crisis. One or two days after its administration, the urine becomes very abundant, clear and of slight density. There is a relative polyuria; the quantity of uric acid and of urea is much lessened. It is an interesting fact that these modifications of the urine occur independently of any change in the temperature.

4. In the cases of chronic articular rheumatism, the quantity of uric acid and of urea is rather diminished. Here the salicylate of soda has no useful result. If a patient with chronic rheumatism be subjected to hot baths, the quantity of uric acid contained in the urine is notably increased. Hence, as Professor Lasègue has shown, such baths are exceedingly useful in chronic rheumatism.

5. The salicylate of soda, as well as the hot bath, does not increase the *aglobulie* peculiar to chronic and acute articular rheumatism.

6. During the course of either acute or chronic articular rheumatism, the quantity of phosphoric acid is lessened, and so remains whatever treatment may be employed.

Notes and Queries.

CONVENTION OF AMERICAN MEDICAL COLLEGES. —At a meeting of the American Medical College Association, held in Buffalo, New York, June, 1878, Prof. S. D. Gross, a delegate from Jefferson Medical College, of Philadelphia, offered the following preamble and resolutions:

WHEREAS, It is eminently desirable that the medical schools of this country should adopt a uniform system of instruction of a grade fully in accord with the requirements of the age in other branches of study, and with the practice of the medical institutions of Europe; and,

WHEREAS, All the efforts to bring about such a change on the part of the American Medical Association, of the Association of Medical Teachers assembled at Cincinnati in 1867, and at Washington in 1869, and of different State medical societies, have signally failed; and,

WHEREAS, The present time seems to be peculiarly favorable for taking strong ground upon the subject, inasmuch as it is now attracting general attention throughout the United States; therefore,

Resolved, That this Association respectfully and earnestly request that the regularly organized and accredited medical schools of the United States hold at their earliest convenience a meeting for the purpose of adopting some definite and final action upon a subject of such vital importance to the dignity, character and usefulness of the profession and the welfare of the American people.

Resolved, That in order to impart proper efficiency to this plan each and every college be requested to send two delegates, consisting of one member of each Board of Trustees, and of one member of each Faculty, with full power to act for their respective institutions.

Resolved, That the medical and secular press throughout the United States be respectfully requested to lend their aid in the dissemination and discussion of these preambles and resolutions in order to place the whole matter of medical education prominently before the profession and the people.

Resolved, That a copy of these preambles and resolutions, signed by the President and Secretary of this Association, be transmitted to the

officers of every regularly constituted medical college in the United States, with a request to hold the contemplated meeting at Washington City, or at some other central point, on the first Wednesday in September next, or as soon thereafter as possible.

Prof. N. S. Davis seconded these preambles and resolutions, and heartily indorsed them.

Prof. T. G. Richardson moved that the time of the proposed meeting be fixed at the Friday preceding the meeting of the American Medical Association, and that the place be designated by the President of this Association. This amendment was adopted, and the preambles and resolutions as amended were adopted.

In compliance with this action of the American Medical College Association, its Acting President, Prof. N. S. Davis, of Chicago, has designated *Atlanta, Georgia*, as the *place* of the proposed convention, while the afore-mentioned action of the Association has fixed the *time* at 10 A. M. Friday, May 2, 1879. It is earnestly hoped that delegates from all "regularly organized and accredited medical schools" in the United States will promptly meet at the above designated time and place. That the action of the convention may be definite, it is desired that each college send two delegates, with full power to act for their respective institutions—one of these delegates to be selected from the Board of Trustees and one from the Faculty.

In general terms, the *object* of the convention is to adopt some "uniform system of instruction more in harmony with the requirements of the age." Among the questions appropriate for discussion and decision may be mentioned, "Shall all the colleges require attendance upon three regular courses of lectures during three separate years ere admitting students to become candidates for the degree of M. D.? Is any uniform system possible in this or other things? If so, to what extent is it possible or even desirable at the present time?"

Each doctor in the land doubtless has in mind an ideal medical college system. But this convention can not act upon idealities; it can only act upon that which is practicable to all honest, efficient medical schools.

It is hoped that the medical press and teaching fraternity will freely and exhaustively discuss the subject-matter of this convention. The doing of this at once will enable it to enter upon its labors with a very complete knowledge of the facts in the case.

To avoid misconception, let it be distinctly noticed that, although this convention is called by the "American Medical College Association," it is entirely distinct from that body. When assembled, the convention will elect its own officers and adopt its own methods for transacting its business in pursuance with the object of the call.

COMMENCEMENT AT THE MEDICAL COLLEGE OF INDIANA.—This college held its first commencement exercises on February 28th. Dr. G. W. Mears, Dean of the Faculty, delivered the opening address, congratulating the profession upon the consolidation of the two former medical colleges, and upon the good work done by those who were about to receive their degree. After a few remarks by O. A. Burgess, D. D., President of Butler University, the degree of M. D. was conferred on sixty-six graduates. Then followed the valedictory, delivered on the part of the faculty by Dr. C. E. Wright. The following is a list of the graduates:

John A. Aldred, P. S. Baker, Wilson T. Banker, Eli F. Brown, B. Byrnett, M. L. Bosley, A. W. Brayton, Charles E. Ballard, L. F. Brown, W. H. Butler, J. T. Burford, Ernest Copeland, G. W. Crider, Ben. Davis, George H. Davis, P. K. Dobyns, Chas. A. Daugherty, B. T. Fisher, S. C. Fitzgerald, A. B. Ferguson, James M. Gentry, C. O. Hood, James H. Holmes, George H. F. House, N. P. Howard, Jr., Frank F. Harvey, Charles C. Hill, W. F. Heinrichs, James M. Jones, Caleb V. Jones, Jr., Alpheus H. Julian, Oscar B. Johnson, Royal Jennings, Julius Krug, John Kutch, John V. Littell, Henry Long, G. Thompson McNutt, Geo. C. Mason, William R. Moffitt, James A. Modesitt, S. W. McMahan, W. F. Oliver, L. B. Paul, John L. Puckett, John W. Partlow, L. L. Quick, Thomas R. Rubush, J. S. Ragan, R. H. Ross, Frederick Stevens, James W. Scott, J. A. Sims, Gerhard W. Sommer, J. H. Spurrier, Benjamin F. Snyder, James T. Towey, C. L. Thomas, W. P. Yonkey, I. C. Wood, Oscar L. Wilson, O. P. Waite, W. L. Wade, P. J. Watters, Chas. Yoke, W. A. Yohn.

COMMENCEMENT EXERCISES OF THE UNIVERSITY OF LOUISVILLE.—The commencement exercises of the University of Louisville were held February 27th, at Public Library Hall. The Medical and Law Departments united in the exercises.

The Yandell gold medal, named in honor of the late Dr. Lunsford P. Yandell, Sr., was won by Dr. A. Forst, of Kentucky; the second gold medal was won by Dr. Frank Pusey, of Kentucky; and the third by Dr. Chas. Murphy, of Indiana.

The undergraduates' prizes were awarded as follows:

To Mr. R. Maupin Ferguson, a case of surgical instruments, offered by Messrs. Arthur Peter & Co.; Mr. James P. Slaughter, the books offered by Messrs. John P. Morton & Co.; and Mr. Murray B. Manly, a case of instruments, offered by Mr. Simon N. Jones. The same gentlemen won honors in the undergraduates' contest.

The names of the following gentlemen appear on the roll of honor:—Abraham Forst, of Louisville; Frank G. Pusey, of Kentucky; Charles W. Murphy, of Indiana; Finis E. Jeffery, of Arkansas; Isaac F. Miller, of Arkansas; A. Miller, Kentucky; Isaac J. Newton, Jr., Arkansas; Archie O. Burton, Kentucky; Wyatt I. Letcher, Kentucky; Albert O. Oliver, Alabama.

The degree of Doctor of Medicine was conferred on eighty-four candidates, named as follows:

Marcellus F. Alford, Louisiana; Rezin L. Armstrong, Louisiana; Nicholas R. Alvey, Kentucky; William B. Battle, Tennessee; Edward A. Baxter, Arkansas; Joseph E. Bland, Kentucky; James G. Boston, Indiana; Andrew J. Brewer, Arkansas; Archie O. Burton, Kentucky; Archie C. Barr, Kentucky; James H. Carter, Indiana; Wm. L. Chester, Tennessee; Joseph H. Clark, Kentucky; Lyttleton B. Cook, Kentucky; John W. Cook, Indiana; John J. Cook, Mississippi; William A. Cole, Indiana; Isham E. Cottingham, Kentucky; Thos. H. Curd, Kentucky; John J. Dial, Texas; William T. Durrett, Kentucky; George D. Dickerson, Mississippi; Henry T. Dixon, Kentucky; Jerome B. Dillon, Kentucky; Lindsay English, Jr., Illinois; John W. Fischer, Indiana; Abraham Forst, Kentucky; Paul Foster, Louisiana; Hilary Gaither, Indiana; Enoch N. Gentry, Missouri; William G. Harrison, Kentucky; William E. Herndon, Kentucky; Benj. F. Hill, Kentucky; Thomas B. Hodges, Arkansas; Uriah G. Holloway; William T. Hubbs, Tennessee; Robert

S. Jamison, Mississippi; James F. Jarvis, Missouri; Finis E. Jeffery, Arkansas; Garrett D. Judy, Kentucky; Robert C. Kenner, Kentucky; James D. Kirkpatrick, Kentucky; Samuel L. Ledbetter, Mississippi; James M. Lefeber, Indiana; Wyatt I. Letcher, Kentucky; Robert Lovelady, Arkansas; John W. Martin, Jr., Missouri; Anthony Miller, Kentucky; Isaac F. Miller, Arkansas; Geo. T. Milligan, Kentucky; Archie M. McConnell, Kentucky; William W. McDowell, Kentucky; James A. McNally, Kentucky; Charles W. Murphy, Indiana; Isaac J. Newton, Jr., Arkansas; William D. Neel, Kentucky; Albert O. Oliver, Alabama; John W. Peeples, Tennessee; William T. Plummer, Kentucky; Frank G. Pusey, Kentucky; Bradley T. Rafferty, Indiana; Ralph Redditt, Mississippi; Andrew B. Robinson, Indiana; Hilary D. Rodman, Kentucky; Dionysius B. Rudy, Arkansas; Paul C. Seng, Kentucky; John L. Slayden, Kentucky; Samuel J. Spencer, Arkansas; Samuel H. Slaughter, Kentucky; Jas. G. Stark, Tennessee; Clarence A. Strickler, Kentucky; Joseph A. Swartzel, Indiana; Benjamin F. Taylor, Kentucky; Andrew S. Thompson, Mississippi; George T. Van Cleve, Kentucky; Henry Vonderbeck, Kentucky; E. Frank Waller, Kentucky; Jos. H. Weller, Iowa; Buchanan S. Wert, Alabama; Frank W. Weis, Missouri; Columbus V. Wedding, Kentucky; Christopher R. Williams, Kentucky; William A. Wilson, Mississippi; John L. Whitnel, Illinois.

The valedictory was delivered by Professor J. W. Holland, and was admirable both in matter and manner. His subject, Sanitary Reform, was timely chosen. It reads as follows:

Ladies and Gentlemen: It is my part to say the formal good-bye of the medical faculty to their late pupils, and to so say it as not to bore this miscellaneous company.

The *Alma Mater* has trained her children in the way in which they should go, and, after the manner of good mothers, gives her pious injunctions at parting in such terms as shall be edifying to those not of the family, who are yet interested and who assist at the spectacle. I have chosen as a special topic "The Ounce of Prevention," at the risk of being prosy upon an occasion considered sentimental; but for fear of putting the damper on your gladness, I shall confine my remarks to a narrow field of the subject, and be quickly done with what I have to say.

Of your number the majority are destined to be men of action, satisfied at the utmost with doing well the ordinary things that must be done somehow. A very few will most likely seek knowledge in unbeaten tracks and guide the opinions of their fellows. The civic virtue of enthusiasm for the public health, for which its representative in the faculty is widely known, must strike fire from the souls of some who sat at his feet or witnessed his disinterested zeal. The world and the time call loudly for medical men who shall be pure priests of sanitary science and able preachers of the faith. Each of

those diplomas bears our motto, expressing the aim of our efforts to keep sound the strong as well as make sound the weak. If the University, in preparing for every-day work her thousands of useful servants, could, in fifty years, train in the right direction one inspired observer to a pathfinder through the darkness which surrounds the causation and prevention of an epidemic, it would be more than armies to the public weal. Surely the hope is not vain or the value of such work exaggerated.

Let us read again the history of vaccination. The name of Jenner should have power to conjure the spirits in hearts of little faith as long as his talismanic scar is a shield against small-pox. To Pasteur France acknowledges a heavy debt of gratitude for the febrine discoveries by which her sinking industries were revived and her fairest provinces saved from ruin.

Emulate while you wonder at young Koch, doctor in a German village, who, during his spare hours, discerned with his microscope the living germ of splenic fever, that had poisoned to death the blood of men and slaughtered hecatombs of cattle. But yesterday Klein, of London, recognized the animated contagion which, in the blood of the pig, made the havoc called infectious typhoid. Collaborers in other parts of the world confirm these discoveries, and announce every detail of the pernicious life of the unbidden guests. Their habits are noted, their protean forms described, their thermal death-point determined.

Of the many experimenters now engaged in these enterprises of great pith and moment may be mentioned Ballinger, who has lately found indubitable proof of the significant fact that the spores of a certain septic organism have greater powers of resistance than the adult, germinating after exposure to a temperature ten degrees above the boiling point of water. At the Brown Institution ingenious workers have shown that the "grains" used by cattle for food are favorable soil for the growth and reproduction of a germ which can be made to produce diseased effects at will under the simplest conditions. Their next note records a fatal epidemic which, from scattered points, has been directly traced to these organisms, found in a particular sample of brewers' "grains," used as food. Last summer Downes and Blunt noticed that the development of bacteria of putrefaction was arrested by direct sunlight. Every inquest conducted by careful methods into the life, history and habitat of these lowly forms, and their relation to infection, stands a chance of revealing highly important truths. Every discovery in this field supplies some part of the evidence lacking to make what is called the germ theory of disease something more than a good working hypothesis.

When it is generally conceded that two epidemic diseases in the higher animals depend upon the introduction of particular species of microscopic being; that in man another species of the same genus is associated in the same way with septicemia, another with splenic fever, and a third with relapsing fever, we can not escape the conclusion that the other fevers and inflammations of this type have probably a kindred origin, and that further research, as ingenious and patient as those just quoted, will be rewarded by results as brilliant. If among you there is one would-be Pathfinder let him

take this luminous record as a lamp to his feet. The published achievements of that system of treating wounds which protects the patient against these ferments that would breed infection if admitted into his blood, have demonstrated the usefulness of these studies. They have won many converts to the view that nature plays a close game against her weak antagonist, and that his largest losses come by ignorance of her dark ways. To win in this rigorous game, it is better far to put a check upon her every move than recklessly to throw away pawns in the hope of making a brilliant stroke to remedy the critical situation. A thorough comprehension of the dangers that lurk in the air, embodied in the motes that make it populous, is now the most urgent need of our science. This will give us a prevision upon which will follow hard the precautionary action. Obedience to the law when its terms are known, will make us masters where now we are trembling slaves. The signs of the times, if read aright, foretell that great as is the progress in the art of curing, the day is at hand when that of preventing shall outstrip it.

In despair at finding no remedy for the specific fevers and inflammations, doctors are now with unparalleled industry forging armor of proof and tried weapons with which to foil and extirpate their causes. What heart that has ever softened at the mention of misfortune can hear without emotion, from the official report, that one hundred and twenty-five thousand persons die annually in England who should go on living if the existing knowledge of the causes of diseases as affecting masses of population were reasonably well applied throughout the country. What hand that would lessen this sum of needless sorrow, can hold still while death unhindered gathers this awful harvest. What soul would not be glad to hasten the day when epidemics shall be considered a reproach rather than the irresistible visitation of an angry God.

A mortuary list of fifteen thousand from yellow fever and the loss of a hundred million dollars, which last summer's experience brought upon a limited section, has set in motion an agitation wide and profound, that shall certainly end in definite improvement if actively fomented and wisely directed. If the sense of the nation were taken there would result an overwhelming vote of urgency for sanitary legislation to aid in protecting us from the invasion of that subtle and relentless enemy of the race which every summer menaces the southern half of our land. Should the tide of feeling be taken at its flood we may see such a change wrought in the causes of mortality, as followed the movement in England after the cholera of 1849. The time is ripe for action, but the diversified opinions and the jarring interests at stake require cautious engineering and nice adjustment of power.

Government work should not only be in harmony with our cherished political institutions, but should avoid provoking sectional and commercial jealousies. Crude and panicky measures that bear down all considerations but the prime one of safety, will not meet with universal agreement and co-operation; but more likely there will follow a reaction even of the most progressive, which will put us further back than we are at present. The wisest course should conform to a broad scheme of public hygiene far reaching and permanent, based upon the most advanced knowledge and having in view

ultimately the education of individuals ignorant of our glorious gains to a right appreciation of this phase of private and public duty.

"Then if each will see to his own reformation,
How very easily we might reform the nation."

There is time to-day for presenting the outlines of a system of sanitary government which occurs to me to be open to but few objections. If it meets with your approval, advocate it in season and out of season. It will take a "long pull, a strong pull, and a pull altogether," if you wish to add materially to the comfort of man's estate; if you would save the thousands that prematurely die, and ward off the needless misery of multitudes that suffer impaired strength, ruined fortunes and family bereavements.

There should be created by act of Congress a National Council of Health, made up of noted sanitarians, who shall elaborate a judicious national quarantine; appoint experts to make inquiry into the mode of identification, causes and prevention of epidemics, by experiment and observation at points where the diseases are actually at work. They should frame systems for state and local sanitation, the establishment of which, in every part of the country, is of importance to the entire continent, and should, therefore, be encouraged by the government at Washington through appropriate legislation. They should take steps in time of an epidemic, through proper channels, to disseminate knowledge of its nature, mode of propagation, and means of checking its advance. A bulletin issued from a source eminent for the qualities needed, (that is, thorough understanding of the subject and of proved sagacity,) would receive in every quarter respectful consideration and its recommendations a ready compliance. If, in process of time, by classification of accumulated data, such gain would accrue to sanitary science as has enriched meteorology through the acquisitions of the Weather Bureau, then the era of doubt expressed by the headlines "Probabilities," would give place to that of confidence denoted by the title "Indications." We shall then wonder that there was ever a time when epidemics were classed, as storms once were, among things inscrutable and supernatural. As ships sail and various industries are guided by the official statement of "whence the wind cometh and whither it goeth," so sorrow shall not again sit in the streets, when by improved processes we detect and arrest the pestilence that walketh in darkness, and stamp out at its birth the destruction that wasteth at noonday.

Each state should have a Board of Health, with authority from the legislature to apply the regulations adopted at the suggestion of the National Council, and to appoint executive officers for the districts into which the state should be divided. The forces of human life are sustained or weakened by conditions essentially the same in every habitable latitude. Diseases do not respect bailiwicks, nor does the state line limit their domain. It is a serious hindrance to reform that already the different sanitary codes of the fifteen states which have adopted them are out of concert, and in some cases are in direct conflict.

To secure the desired end, the science of health and quarantine, as interpreted by the National Council and embodied in laws, ought to be uniformly received and rigorously enforced. Some legislatures have been so jealous

and niggardly in carrying out this important function as to grant their Health Boards no authority but that of giving advice, and no appropriation beyond the salary of a compiling clerk. To make a code effective, it must be imperative and its enforcement assured by police and penalties. For years there will be much unwillingness to yield to what seems to the unconcerned a useless interference with private rights.

In order to protect herself against the plague Venice found it necessary to pronounce death upon any one who broke the laws of the Health Board. There are selfish and short-sighted Americans who would require sharp discipline to make them conform their lives to the public needs. It is safe to say that last summer millions of dollars and thousands of lives would have been spared if Louisiana, Tennessee and Kentucky had rigidly applied in time such enactments as an enlightened board would recommend. A well-organized and vigilant body of officers might have removed the recognized local conditions of yellow fever, not to mention the disputed specific element which official report says was fenced out in more than one instance by municipal precautions. Municipal boards may be organized by cities under the supervision and control of the State Board.

It should be the duty of the district health officer to have enforced the general sanitary laws, and any special requirements called for by pestilence. In the local service it will be long before all the details are worked up and order brought out of confusion. Much is gained if the people can be protected against cholera and yellow fever. Success in this will reconcile even the most unwilling to further attempts to bestow upon villages and scattered dwellings the benefits enjoyed by the cities whose triumphs in reducing the bills of mortality are well known facts, in which all philanthropists rejoice.

A fine instance of efficient work of this kind is afforded by the corporation of New York city. They have been convinced by common sense and statistics that, as physicians know more about disease than the laity, and as sanitary engineers are superior in their specialty to the average politician, it is well to trust these vital matters to their skilled hands. The district officer should preferably be a medical man, qualified to ferret out the causes of local outbreaks and study their peculiarities. His character should be in keeping with the responsible duties intrusted to him—duties that move along the higher plane of professional work. Remember that you do not rise to the level of the ideal, you will not completely illustrate the intrinsic nobility of your calling and its claims upon the gratitude of mankind, until by your persistent efforts the environment is brought under control, and its inflictions in the shape of pestilence be prevented. It is a wise saying that a statute is a dead letter when the majority do not feel that its execution will be a material help. The public-spirited doctor has opportunities every day for inculcating the gospel of maintaining mental, physical and moral well-being by due observance of nature's laws.

To insure that the sanitary code shall not be a dead letter, it will be necessary to instruct your patients in domestic and personal hygiene, and by incessant agitation start a general demand for the official application of known principles of health to the surroundings of the community.

The health officer should find in you a willing coadjutor in suppressing town nuisances, and removing collections of filth before they engender their deadly brood; isolating contagious cases and securing for them a private burial; advising as to the salubrity of town sites, and procuring by concerted action the drainage of marshes too near human habitation; compelling the authorities to provide an abundance of pure water and adequate sewerage; keeping an eye on the food in the market places; furnishing the data for the record known as vital statistics, and giving free vaccination to the poor. At all times let him have your support and hearty coöperation.

In the hour when apprehension of impending pestilence imposes upon him a task to try the stoutest will and best disciplined brain, do not embarrass him by the dissensions that have made our profession a by-word, but stand by his side, and when his hands waver in their mortal weakness hold them aloft as long as the battle rages. In the words of Burke, "applaud him when he runs to his object; console him when he falls; cheer him when he recovers, but let him pass on; for God's sake, let him pass on."

Let the individual opinion wither that the public trust in authority may grow strong. As you would refrain from adverse criticism of the ethical system under which we live, before one under deficient moral control, so speak of your medical objections to professional audiences only. Show to the world that doctors can conquer themselves as your predecessors have shown that they can die at their posts when the evil day cometh. Your Alma Mater need not tell you to be brave and self-sacrificing; her Spartan sons return with their shields, and too often are borne home upon them. Some day when you revisit the halls you are now about to leave, you shall find a memorial tablet upon which will be engraved the names of her dead heroes. Their deeds were such as old Plutarch loved to tell. To the age of fable must we go to find a parallel for the Hickman episode which closed the life of Dr. John L. Cook, of Henderson, Ky. His incomplete but shining career reminds us of the fragmentary statue of Theseus; the grand members that we see are of a mold to rescue weakness in many adventures, and even now they fire the imagination of the observer, who laments the missing portions, till the torsa is transfigured a finished masterpiece. Among these names will be that of Renner, of Indianapolis, who two years ago stood here for his honors, our St. George, the Christian knight-errant, who from his secure home in the North went down to the stricken land and into the air that was poison to his unaccustomed frame, to fight a dragon all too strong for even his faith and devotion. While too much can not be said in favor of a prudent regard for the laws which when violated entail suffering of mind and body, there is something not open to censure but worthy of the deepest reverence in these sublime actions that reck not of health nor of danger, when humanity cries for help, but avow their proud trust in the energy of manhood and the resistance of the individual will.

"Henceforward, rise, aspire,
To all the calms and magnanimities,
The lofty uses and the noble ends,
The sanctified devotion and full work,
To which thou art elect forevermore."

MR. CHIENE'S LECTURES ON SURGERY.—The writer of this note being much interested in the application of antiseptics to surgical practice, obtained last summer, while in Edinburgh, the promise of Mr. Chiene to furnish him a report of such lectures, in the course Mr. C. was just then concluding, as related to antiseptics, and to the subjects which led to a proper understanding of the principles on which the use of these agents was based. The title which the author himself selected, that of the "Elements of Surgery," we must be allowed to think is not well chosen, for certainly in the main the lectures will relate to other, and to practitioners weightier, matters. The earlier lectures in the course will consist of an attempt to demonstrate that wounds heal, as John Hunter asserted, by blood-clot—that the colorless blood clot and inflammatory lymph are one and the same thing. The causes, symptoms and principles of treatment of inflammation will then be discussed; suppuration, putrefaction and the antiseptic system follow next in order; while mortification, ulceration and the practice of antiseptic surgery, illustrated in the treatment of wounds, compound fractures, etc., will conclude the course. We accept in advance the thanks of our readers for providing them with a thorough good piece of work on the great question of antiseptics, done by a conscientious and intelligent observer, who has had at his disposal all the means necessary to enable him to begin with sound premises and arrive at correct conclusions.

MEDICAL COMMENCEMENTS.—At the Commencement of the Miami Medical College of Cincinnati, on the 28th ultimo, the degree of M. D. was conferred upon thirty-four candidates. Dr. J. A. Murphy, Dean of the Faculty, before presenting the students for their degree, took occasion to speak of the relation of the profession to the people. One point which he especially emphasized was what he termed the Ohio "barbaric idea," which "idea" was to prevent dissection by imposing a heavy fine on any one having in possession material for dissection. Such a bill was recently introduced into the Ohio

legislature by a Mr. Jackson, and the manner in which Dr. M. pointed out the ridiculous position of this pseudo statesman and his confrères, would become the satire of a Juvenal. The valedictory was delivered by Dr. E. Williams, who deviated from his specialty, and gave an able address on "Alcohol and its Uses"—a subject which has received too little attention from the physician especially and the public generally.

The Medical College of Ohio held their graduating exercises on the same evening, at which time one hundred and one gentlemen took the degree of M. D. Dr. Bartholow, in his preliminary remarks, followed a train of thought somewhat similar to Dr. Murphy, and said that an unprejudiced person could readily "see how far behind our so-called statesmen of Ohio are in their conception of the duty they owe society in the matter of medical education." Dr. C. D. Palmer delivered the valedictory, showing that there is *unity* in our art, and that true scientific medicine is not composed of a mass of heterogeneous theories, speculations, pathies and dogmas, but that our stronghold is *rational medicine*.

PAUL FABER, SURGEON.—One of the best of recent novels by George MacDonald is that having this title. We think it will prove especially interesting to professional readers. They will find several professional topics presented, such as venesection, vivisection, transfusion, and resuscitation of the drowned. Possibly George MacDonald's theology may not be acceptable to all, nevertheless there is much of vivid description, of thorough analysis, and of broad, catholic thought in the book, which can not fail to not only interest but also to improve the intelligent reader.

WILLIAM H. BYFORD, M. D.—Dr. Byford has been elected to the Professorship of Gynecology of Rush Medical College. We congratulate the college in establishing this chair, and in filling it so ably. But why should he desert his old associates and the medical school which he assisted in establishing, and to the success of which he has contributed so much, and cast his great influence in behalf of a rival institution?

MEMORIAL ADDRESS

ON THE

Life, Character and Death of Dr. John L. Cook,

OF HENDERSON, KENTUCKY,

*Who died at Hickman, Ky., of Yellow Fever, October 1, 1878.**

The State of Kentucky contributed with a lavish hand the lives of her precious sons in the apparently futile effort to stay the ravages of the death-dealing epidemic of 1878. Fully 20,000 of our fellow-citizens of the Southern States have perished at the hands of the monster Yellow Fever, during the present year. Many of the fairest portions of the sunny South have been decimated by the plague in the last four months. Over one hundred of our medical brethren have found untimely graves in their efforts to save others from the horrors of the "black death" which has been running riot in the most beautiful country under the sun. The story of Grenada, New Orleans, Memphis, Vicksburg, Holly Springs, Greenville and Hickman, can never be forgotten, while pity has a tear to shed for the loved and the lost. But to us the saddest chapter in the history of the late devastating simoon of suffering and death, we find in the melancholy fate of Hickman during the last three months. Its sorrowful remembrance even now rests like a funeral pall upon the hearts of our people. It was in that death-stricken town, when the brave CATLET, BLANTON, the PRATHERS, FARIS, and CORBETT had fallen in the defense of the people who had loved and trusted them, that the fearless volunteer physician, our hero, our late companion, Dr. John L. Cook, yielded up his life upon the field of proud honor, in the thickest of the fight, in defense of the lives of strangers, with his face to the foe, dying as a brave man loves to die, for God and his

* Read before the McDowell Medical Society, at Hopkinsville, Ky., October 30, 1878, by J. W. SINGLETON, M. D., of Paducah, Ky.

fellow-man! A brief sketch of the life, character and death of our late brother and associate, Dr. Cook, may be recorded here as a memorial of "the spirit that's gone," that others may remember his example, and strive to imitate the virtues that commended him so strongly to the hearts of his medical brethren.

John Lay Cook, son of Edmund and Elizabeth Cook, was born July 3, 1838, in Russell county, Kentucky, and raised near Jamestown, in this state. He was educated at a country school in his native county, and at the age of fifteen years began teaching a mixed public school, on his own account; in which he was eminently successful, not only, in educating the pupils under his charge, but in informing and disciplining himself, mentally and morally, for the attainment of the difficult studies in science for which he afterwards became distinguished. In early manhood young Cook commenced the study of medicine with Dr. Rowe, of Rowena, Ky.; and as early as nineteen years of age began the practice of his profession.

In 1861, at the age of twenty-three years, John L. Cook enlisted as a private soldier in the Third Kentucky (Confederate) Cavalry, commanded by Colonel Gano, and afterwards served under Colonel Chenault, and then Colonel now Governor James B. McCreary, of Kentucky. He saw considerable service in Kentucky, Tennessee and Virginia, and was finally captured with Gen. John H. Morgan, at Buffington Island, Ohio, in the noted raid through that state. Dr. Cook was confined a prisoner at Camp Douglass, Illinois, for nearly two years, and while there was given the charge of his sick comrades, to whom he ministered with characteristic and untiring devotion; some of these gentlemen who reside in Henderson now, speak of this feature of Dr. Cook's life in terms of unbounded praise. "They say, too, that his patience under the hard conditions of confinement, and his bright and cheery manner, under all circumstances, were the praiseful theme of every tongue, and that there was no man in the prison who did not hail his company and the assurance his society afforded, as actually a boon from heaven." What a full and perfect indorsement of Dr. Cook's nobility is found in the love and admiration of his late comrades in arms!

Dr. Cook's first location after "the surrender" was at Bardstown Junction, Ky., where he made money enough at the practice of his profession to enable him to attend a course of lectures and graduate in the Medical Department of the University of Louisville. He commenced the practice of medicine as a graduate in Shepherdsville,

and a partner of Dr. H. C. Crist, a leading physician of that place. Dr. Cook remained at the latter town for three years, and did well, making many admiring friends. In the fall of 1869 Dr. Cook went to New York, attended a winter course of lectures in the Bellevue Hospital Medical College, and graduated in that flourishing institution in 1870. Upon his return from the east he remained in Shepherdsville but a few months, and discovering a wider field of usefulness, he removed to Henderson, Kentucky.

Dr. John L. Cook became the husband of Miss Annie B. Oldham, at Elizabethtown, Ky., May 15, 1871, the Right Rev. Dr. Cummins, of the Episcopal church, performing the ceremony of marriage which united our lamented friend to one of the gentlest and brightest of her sex. Soon after this happy event, Dr. Cook was induced to locate in Elizabethtown, where he remained some eighteen months, and then moved back to Henderson, and of which he was a beloved and trusted physician, and honored citizen at the time of his lamentable death.

“Self-made men are the glory of the world.” John Lay Cook was truly a self-made man. He was the architect of his own fortune, the riches of which were found in his personal, moral and professional excellences. So far as this world’s goods were concerned, he never received a legacy of even one dollar, to remind him that he might have been a favored child of wealth and ease. All the blessings of the gods are not bestowed on all alike who richly deserve them; but thank God!

“The rank is but the guinea’s stamp,
The man’s the gowd for a’ that.”

Infinitely more precious to him than gold or diamonds, were the wealth of the power of doing good to his fellow-men, and the loving wife and children with which Providence had blessed him. And now even they, with the wide world before them, which alas is too often cold and unkind, would not exchange the holy remembrance of his martyrdom on the altar of self-sacrifice, and the surpassing beauty of his immortalized name, for the wealth of the universe. Dr. Cook, like nearly all truly scientific men and devoted students of art, was entirely destitute of financial talent in the use and accumulation of wealth; in fact he did not seem to care anything about money. Aware of this deficiency in his character, he was exceedingly cautious and loth to risk property or anything else in the way of speculation. He was liberal from principle, and extremely lenient

towards his patrons whose honorable intentions were not seconded by the necessary ability to pay. Outside of medicine and its kindred studies, Dr. Cook's literary tastes were almost altogether in the line of history and science. He was indifferent to the works of imagination, with the exception of our greater standard novelists. He was extremely reticent in the expression of his religious belief, but his actions and conversation were entirely consistent with the purest christian life. In few words, our deeply regretted brother, Dr. Cook, was "a man without guile," a lover of mercy and justice, honest, modest, tender, patient, kind and brave; he was a nobleman, whose memory will ever remain fresh and bright in our hearts. My friend, Dr. James H. Letcher, of Henderson, the Secretary of the Kentucky State Medical Society, has kindly written the following most accurate personal description of our hero:

"Dr. Cook was in person tall, being six feet two inches in height, of well developed physical constitution, having an average weight of two hundred and fifteen pounds, and blessed with rare good health. His hair was black, and lying in heavy clustering curls, in which the first tint of gray was displaying itself. His eyes were brown, in whose steady gaze the unflinching character of the man made itself manifest. Complexion somewhat bronzed by exposure, and naturally a clear brunette. Mouth firm in its close, but relaxing into a most graceful and winning smile. His hands were remarkable for beauty, no man's I ever saw ever excelling them in beauty and softness; while his head was set upon a neck massive and shapely as a beautiful column."

Dr. Letcher has done ample justice to the personal appearance of his late friend and associate; but there is something yet to be said of him that was not in Dr. Cook as a handsome or a fine-looking man; there was something in his commanding, intellectual and spiritual presence that challenged the respect even of strangers. "A combination and a form, indeed, upon which every god did seem to set his seal to give the world assurance of a man."

Dr. Cook was a member of the Kentucky State Medical Society, of the McDowell Medical Society, and of the Henderson Medical Club. He was an honored ex-president of "the club," and for years took an active and spirited part in the interesting and profitable discussions of that most excellent local society. No man was more patient in the investigation of medical questions of difficult solution than Dr. Cook; no one could have been more careful than

he in forming an opinion in a doubtful case, or more modestly respectful towards the opinions of others; but having made up his mind on any given subject, he defended his position with determination and zeal, and always on the highest points of knightly courtesy, and the best of his profession found Dr. Cook, for the time being, "a foeman worthy of their steel." In answer to certain questions asked of one of the members of the Henderson Medical Club, with which he was so long identified, and among them what was Dr. Cook's medical *forte* or *specialty*, Dr. Archibald Dixon wrote:—"If Dr. Cook had any *specialty* it was in physical diagnosis, and more especially as regards diseases of the chest. He was exceedingly accurate in physical diagnosis, and I valued his opinion in that branch as highly as that of any medical man in Kentucky. He was, as you may say, a *theorist* (though in the main a successful practitioner), and gave up his life in the attempt to demonstrate his peculiar theory in regard to yellow fever; believing that it was not contagious and non-infectious. He was a good student, fully keeping up with the most advanced ideas of his profession. He was a liberal, free-hearted, noble fellow. He was a pure and upright man, one of spotless integrity, in whose hands the reputation of every one was safe." In truthful attestation of the testimony of Dr. Dixon, come the words of Dr. Pinckney Thompson, Dr. Cook's friend and neighbor. Speaking of Dr. Cook's many virtues as a physician, and as a man, Dr. Thompson says:—"The name and character of any brother was perfectly safe in Dr. Cook's care and keeping;" and this is the highest compliment that can be passed upon any professional man in his relations and associations with his brethren.

Dr. Cook was for several years after his graduation an industrious and able contributor to the medical press of Kentucky, Virginia, and Indiana. In the August number, 1875, of the *American Practitioner* will be found an account of an interesting "Case of Athetosis" that came under Dr. Cook's notice; also in the same journal for August, 1876, there is a strong article from Dr. Cook's pen on "Capillary Bronchitis;" and in the September number of same journal, 1877, a paper from Dr. C. on the "Germs of Diphtheria." The *Virginia Medical Monthly*, published in Richmond, for September, 1875, has an article from Dr. Cook on "Curable and Incurable Diseases." The *Medical Monthly* for March, 1876, an essay on "Fever," from the same industrious pen; and likewise the profession will find a letter on "Pulmonary Tuberculosis," in the July number of the *Virginia Medical Monthly*, 1876. I regret that I have not time to

call attention to the leading points advanced in the afore-mentioned papers. I can only say that they belong to the common treasury of medical science and art, and will bear the most careful examination. The Transactions of the Kentucky State Medical Society for 1876, contains another paper from Dr. Cook on one of his favorite subjects, "Capillary Bronchitis;" and also, our State Transactions for 1877, an excellent production from the strong pen of our departed friend and associate on "The Physical Therapeutics of Fever;" a paper on "Improvements in the Practice of Medicine," read at the Frankfort meeting of the Kentucky State Medical Society in 1878. Among the papers printed by the McDowell Medical Society in 1876, I have found a thoughtful, though brief essay from Dr. Cook, on "Aborting Diseases." He may have contributed other papers to this society, but I have so far been unable to obtain a list of them. At the meeting of the Tri-State Medical Society of Indiana, Illinois and Kentucky, held at Evansville, Indiana, in October, 1877, I had the honor of reading for Dr. Cook, he being unavoidably absent on that occasion, a short and practical paper on "Malarial Coma." It was highly praised by the members present, and was printed with the proceedings of that society in the Cincinnati Lancet and Observer, in the early part of the present year. To conclude this part of our subject, by a singular and sorrowful coincidence, Dr. Cook wrote, for the Louisville Medical News, a paper on "Yellow Fever," defending his cherished theory to the last, and which was published five days after his sudden and premature death.

Dr. Cook was an earnest and deep thinker in medicine, and a vigorous writer. There were so many elements of the *hero* embraced in his composition, that he might probably have been considered in many respects a heroic practitioner of our art. Notwithstanding Dr. Cook's rare personal modesty, as he was at times even in the presence of his most intimate friends quite diffident, when aroused to action, he moved promptly and strongly towards the point which he wished to attain. He had faith in the curative powers of medicine, and confidence in the conclusions which he had drawn from study and experience. He cherished a positive belief in the theory and practice of aborting disease at the very first onset, and especially of giving the *coup de grace* to our ordinary fevers at the commencement of the attack. His motto was, "to stand by the patient with a clear judgment and a steady and resolute hand, and save him from untold aches and pains, and rescue him from untimely death." As

we have said before, and now repeat, Dr. Cook entertained a child-like faith in the virtues and powers of the healing art. He was a strong man in the kingdom of American Medicine. His teachings will not be lost upon the minds and hearts of his brethren. Had Dr. John L. Cook lived, professionally, contemporaneous with Rush or Physic, with Drake and the elder Cook, or with the few other pioneers of medical teachings in the west, he would no doubt have impressed himself deeply upon the medical practice of the country, and been regarded as one of the fathers of Kentucky Medicine, of which he died a brilliantly distinguished and promising son. Such as he was we all loved and honored him: such as he is yet, "to wife and child and fatherland," he is to us; though lost to mortal sight, to memory forever dear.

We come now to consider briefly the last sad and heroic act in the beautiful drama of the life of our friend. In 1873 Dr. Cook manifested an earnest desire to go to the help of the sufferers from yellow fever in the Southern States, but was prevented from doing so by his anxious friends. During the past summer he was only withheld from an earlier departure from home by the urgent entreaties and remonstrances of his family. When the yellow fever began its awful slaughter at Hickman, in his beloved state, Dr. Cook concluded to go at once to the rescue of the plague-stricken people, regardless of consequences to himself. His noble and devoted widow says of him: "He left Henderson more joyful and radiant than in the hour of his bridal, confident of his return, and anxious to demonstrate his theory of the disease." Alas! how sadly have we to lament the melancholy forfeit which our friend paid as the penalty of his devotion to a cherished idea in reference to the fever which put an eternal period to his useful and honorable life! Dr. Cook arrived at Hickman on Thursday afternoon, September 19th, at 3 o'clock, and was taken sick on the ninth day after his arrival at his post of duty. After repeated warnings from the brave old hero, Dr. Blackburn, not to expose himself too much, and especially at night, to the death-dealing contagion or infection of the yellow fever sick-rooms, Dr. Cook not only prescribed for the fever patients, as he had voluntarily made it his duty to do, but remained with them, and nursed them night and day without fear of consequences, or hope of fee or reward. A family of six persons were found in one room, all in an advanced stage of the fever. They were poor and squalid, and the citizens discouraged his attentions to them; but Dr. Cook would make no

distinction; he had gone to the relief of mankind, and would recognize no class nor condition. He remained in the infected chamber, and continued his attention as long as it was necessary. He thus imbibed the poison that rapidly placed him in a hopeless condition. His wife was telegraphed, and the associate press dispatches bore the sad intelligence of his illness throughout our beloved country. The good and the true in all the land united in prayer with the people of Henderson, that God would save the noble Cook, and restore him to his home and family. Mrs. Cook arrived at the bedside of her husband two hours before he died. Dr. Cook made an effort at her call to recognize her, but the brave life had ebbed too far, and he could not realize the fact of her presence. He died peacefully and without apparent pain at five o'clock in the afternoon of October 1, 1878. He was buried at half past seven o'clock P. M. on the day of his death—two hours and a half after he had drawn his last breath; and was followed to the grave by his wife and a few brave friends. “A silent tear, a few hastily-gathered flowers dropped on his grave, and all was over.” Peace to his ashes!—Joy to his soul! Dr. John Lay Cook was buried at Hickman, in the midst of the slain on his life's last great battle-field. His gallant predecessors—the PRATHERS, CATLET, BLANTON, FARIS, and CORBETT—who fell in the vanguard of the forlorn hope that they had led into the very jaws of death, and were by angel arms softly lifted over that dark and mysterious river that separates the temporal from the eternal. Nothing daunted by the wrecks of man's destruction that were strewn in front and on either side, our martyred hero moved forward upon his mission of mercy, and became an untimely victim upon the altar of the common brotherhood of man! “He was buried at Hickman,” and there let his mortal body gently rest until the last trump shall sound, and earth and sea give up their noble dead to the bliss of eternal life beyond the grave. The snows of many winters may enshroud the lowly tomb of him so lately with us, but who is now no more. The bright sunlight of southern skies will oft gild his hallowed resting-place with golden halo, and the soft breezes of gentle memory scatter the incense of his dear remembrance among the hearts of all who have known and loved him. Dr. Cook died as true men love to die—for God and the human race. Let his mortal remains sweetly rest at Hickman, in the midst of the fallen companions of his last earthly suffering and sorrow, with the waves of the grand old “father of waters” to

chant his requiem forever, and the rich perfumes of ever-blooming flowers to sweeten and brighten the spot which shall be always dear to the lovers of mankind.

And now, brethren of the McDowell Medical Society, I must draw my sad and imperfect memorial to a close, sincerely regretting that I have not been able to do half justice to Dr. Cook's honorable life, pure character, and heroic death. Let us in our offices of duty, like him, be full of gentle mercy and loving kindness towards our fellow-men. Let it be our pride and ambition to live and emulate the shining virtues and noble example of our heroic and self-sacrificing friend, who has just passed away; of him who has crossed over the dark river at Hickman, and now "rests underneath the shade of the trees of the paradise of God."

Inasmuch as the McDowell Medical Society is a representative body, and in full sympathy with the interests of medical men throughout the world, we will not conclude this address without saying something of those other devoted and brave physicians who have fallen in the epidemic of 1878, outside of our own state. Of the knightly Woolfolk and others at Grenada, and the twenty-seven members of our profession from all parts of this republic who have died at Memphis in the last four months; of our terrible losses at Greenville, Holly Springs, and Vicksburg; in fact, wherever the black-death has held its merciless court our brightest and bravest have fallen in the thickest of the fight, with all their armor on, battling for victory over death and the grave. Taking their precious lives in their hands, with their hearts full of love for mankind, and with God alone as their friend, they went forth to the relief of the plague-stricken. They were armed with the best antidotes to pain and misery—they were animated by a high and holy sense of the sacred responsibilities which they had bravely assumed towards the afflicted in behalf of the cause of philanthropy. These devoted men stood firm when the deadly miasm of contagion was sweeping around them, seeking whom it might destroy, and shrank not. They stood firm when strong men were laid low, and sweet voices were suddenly hushed forever; when the hearts of hundreds were stilled and cold, and hundreds more were being grappled in the talons of the relentless black monster, and shrank not. They stood firm when fathers, mothers, sisters and brothers, "with one fell swoop," were swept down and into shallow graves,

as if by a raging tempest of death and desolation, and the very air they breathed was laden with the poison of death—when death seemed to be written between the stars of the overarching sky, and the germs of mortal agony were mingled with the dews of heaven, and they shrank not. They stood firm when the agonizing cries of poor and suffering humanity, ascending to the throne on high, received no response from the angel of mercy, no tear of pity that could assuage or palliate the dreadful tortures of those around them; when the fountain of heavenly compassion seemed closed forever, and the death-angel stretched his dark wing over the tomb of human hope, the beloved and immortal heroes of our profession (dead and living), in the plague of 1878, stood firm always, and shrank not from the calls of duty and their labor of love. Fully one hundred of our best and bravest have paid, with their lives, the penalty of their single-hearted devotion to the good of their fellow-men; and still in the darkest hours of suffering and sorrow and faithful effort to save others, and even at the portals of their self-erected and self-chosen tombs, they shrank not, thank God, not one of them: their immortal names are all upon the roll of “proud honor,” and there they will remain as long as worldly affliction and human sympathy shall live among the children of men! They stood firm and shrank not—they fell at the post of duty at the hands of the cruel disease which they had often, with watchful care and tender ministrations, driven from the homes of others. But their departure from this world will be forever halloved by the deathless associations of martyrdom in a holy cause, and the chambers of immortality stand wide open to receive them, for they were “faithful unto death,” and shrank not! All hail to their fadeless memory! God bless a profession that can produce one hundred men, in four short months, who were willing to die that others might live!

Let us then, in devoting our lives, our minds, and our hearts to the good of mankind, ever emulate the virtues of our immortal dead; always,

“Do noble things, not dream them all day long;
And so make life, and death, and that vast forever,
One grand, sweet song.”

THE AMERICAN PRACTITIONER.

APRIL, 1879.

Certainly it is excellent discipline for an author to feel that he must say all that he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

Original Communications.

GALVANISM IN THE TREATMENT OF SCIATICA.*

BY V. P. GIBNEY, A. M., M. D.

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CASE X.—*Four months' standing; an intercurrent arthropathy; cure.* J. R., male, aged eighteen years, had been suffering from a sciatica four months, when he made application at the out-door department for relief. This was on September 20, 1877. The limb felt cold, was dull and heavy. The sharp attacks of pain had no influence in bringing warmth to the limb. A current of moderate strength (eighteen cells) gives relief.

21st. Free from pain all day yesterday, and slept well all night. A stronger current (twenty cells) is employed this morning, and immediately he exclaims, "My limb *feels warm.*"

22d. Better in every respect. The limb is not so cold at night now as it formerly was.

24th. Has no more sharp pain, and expresses himself as improving daily.

25th. Yesterday had a few light attacks, which soon passed off; had none through the night. The current is used whenever he calls, *i. e.*, when the notes are made.

* Continued from March No., page 180.

26th. Only a mere tingling sensation is felt about the hip. The limb continues to feel warm, and there is scarcely any lameness. Recently a swelling about the ankle, same side, has made its appearance, but is subsiding.

October 6th. First call since the 26th ult., and he reports that 4th inst., two days ago, he had a severe paroxysm of pain, but none since. It is noted that it rained all that day, and to this he attributes his apparent relapse. Another application.

10th. Pain only on getting into and out of bed, and on suddenly twisting the limb. The condition of ankle is better. Further details are unimportant. It is enough to know that one or two more applications were made, and on December 8th he was discharged cured.

It will be noted, in passing, that I am making no observations on the pathology of neuralgia of the sciatic. Lack of space forbids, even had I any observations to offer. If one read that delightful little book of Dr. Anstie, to which I have already referred, one feels it presumption on his part to offer suggestions, even as to a pathology so little of which can be set forth in the form of the tangible. I am likewise unwilling to consume time with theories as to etiology, thinking that clinical facts are far more valuable; and with this idea before my readers, the object in relating so many cases in detail can be fully appreciated.

CASE XI.—*Twelve months' standing; relieved after four sittings.* K. W., female, aged twenty-five years, came under treatment May 2, 1878. The right sciatic in its distribution was the seat of severe pain, and the limb was stiff, thus causing her to walk very lame. The first symptoms began one year ago, while she was occupying a damp basement floor. The disease has not given much anxiety until within four months, and it is only within the past four weeks that her sufferings have become so great. This morning a strong current is applied for about five minutes, and is followed by immediate relief.

3d. For an hour yesterday there was absence of pain, but it returned with as much severity as ever. Is relieved by a strong current this morning.

4th. Has had less pain, and feels every way better. Pain is only induced by walking, and then is light. A five minutes' sitting.

6th. Improvement marked. Reports herself as free from pain. Patient did not return again, and my efforts to trace the case proved fruitless.

CASE XII.—*Four months' standing; a distal branch of the sciatic the only exception to an established cure; this neuralgia not treated.* B. V., Pole, aged forty years, an ironer by occupation, came under observation December 10, 1877. His first symptoms came without known exciting cause during the summer preceding. The right limb was the one affected, and the usual history as to progress is obtained. He has found most ease in the sitting or recumbent posture. As a rule he sleeps well. It is only by day, as he is standing all the while, that the pain becomes so agonizing. A strong current this morning.

11th. Reports that he had no pain during the greater portion of yesterday, and that the little he did have was comparatively light. Repeat the application.

12th. Worked all yesterday afternoon; this morning the pain returns. A strong current with immediate relief.

13th. As an experiment the ether spray is used instead of the galvanism, and there is no relief.

15th. Was not present yesterday, and had pain all day. The weather was damp, however. A mild current gives relief.

17th. A current of medium strength, though he has had very little pain since the 15th.

19th. Occasional pains, though robbed of their severity. Now refers pain to the calf, while it has heretofore been in thigh and nates. The negative pole is placed over calf, with positive over main trunk; perfect relief.

22d. Condition same as date of last note. A current of medium strength.

February 2, 1879. He did not call again, but I saw him to-day at his home, and I found him free from pain about hip, thigh and knee since December 22, 1877. He has worked all the while. There is, however, an occasional pain below the calf, but this does not annoy him enough to make him seek advice.

This man worked all the while, even when under treatment. There is no reason why a permanent cure should not

have been wrought. The current was probably not strong enough; besides the sittings were not of sufficient length: these we were taking only about five minutes. Further experience has taught us that for old cases ten or fifteen minutes must be the rule. If he could have come daily, it would have been better. The ether spray seemed to have been of no value whatever.

CASE XIII.—*Six months' standing; cure and no relapse after eight months.* J. D., a coachman, aged thirty-four years, applied February 21, 1878, with a history of sciatica dating from a period six months ago, and with the first symptom a pain in the knee. The right side was the one affected. This pain gradually extended to neighboring parts. He knew of no cause. For three months he has suffered so much that he could do no work, and the lameness has been such as to prevent him from attempting to go about. He suffers more acutely toward night, and comes to-day with the usual story about the quantity of medicine consumed. A strong current is applied for about eight minutes.

28th. To-day a *very* strong current is applied, this being the fourth sitting, and he is enthusiastic in the expression of the relief he has obtained.

May 3d. Calls to report that he is well; feels perfectly restored.

6th. Has a little pain on moving the limb. A strong current applied. He did not call again, but on January 20, 1879, I learned from his wife that he had been free from pain or lameness since last spring; that there had not been the first symptom of a relapse; was attending to his work without any interruption, and that he had grown hearty and robust.

CASE XIV.—*Three weeks' standing; cur. with no relapse after eighteen months.* T. B., a fireman, aged twenty-five years, came under the galvanic treatment May 4, 1877. Three weeks prior to this date, while shoveling coal, experienced a sharp pain down the thigh and calf, right side. There had been no extra strain, and no previous exposure. He suffered terrible pain that night, and for four days thereafter was confined to his bed, the least movement adding to his torture. The usual history of paroxysms is present, and at night the suffering is more intense. The thigh is with difficulty extended to the normal limit, and flexion is resisted with about

equal force. The pain is referred to the gluteal region over the sacro-sciatic notch, down posterior surface of the thigh to popliteal space, and down calf to heel. The family history is negative, and the patient himself claims to have always been healthy, though his appearance would seem to contradict the statement. He walks into the office bearing most of his weight on a cane, and can only walk short distances even thus supported. The positive pole is placed over the lumbar spine, and the negative over the site of the nerve at its exit, both being pressed firmly into the soft parts, and a strong current is employed for five minutes.

26th. Has had applications daily for a week or more, then every three or four days, and is so much relieved that he walks without a cane, and with very little trace of lameness. The pain has almost entirely disappeared.

June 5th. Experiences pain only on rising from bed, and on taking a false step. A slight degree of stiffness is present, though not enough to interfere in the least with walking. He obtained work and did not return.

January 10, 1879. Called at his house and learned from him that he had been working steadily since the summer of 1877, without the least discomfort; that he has no pain or tenderness in his limb now, and has not had any for eighteen months; and that the only reminder he ever has of his former disease is an occasional sense of fatigue in the limb after excessive work.

Dr. Anstie, on page 252 of the work already twice mentioned, says:—"In the first place, I have arrived at a decided conviction that faradic electricity is of little or no value in true neuralgias; and that the cases which are apparently much benefited by it will invariably be found, on a more careful investigation, to belong to some other category."

My own experience, if it were recorded, would coincide, word for word, with the paragraph just quoted. I have seen the faradic current used by men who had attained some proficiency in the application of electricity, and I could report the cases now in full did space permit. I shall be pardoned, I know, for introducing the following and concluding case, so well does it illustrate this very subject; and I shall forbear making reference to other authors in substantiation of what Dr. Anstie has so well said.

CASE XV.—*Seven years' standing; restoration to use of limb in two weeks; substitution of faradic for galvanic current, and speedy relapse.* On the 6th of November, 1878, there was brought into the office a German woman of enormous size, aged fifty-one years. Her son and a neighbor had with great difficulty succeeded in bringing her from the carriage into the building. The history, as given by the patient and corroborated by the son, was that she had not walked alone for nearly six years; that she had, seven years ago, a kind of muscular rheumatism, no joints having swelled, and now no crepitation is imparted to one's hand when placed over her joints in motion; that soon after these pains she began to suffer most acutely about the right hip, and down the thigh even to the ankle, the pains becoming paroxysmal and intolerably severe; that she gradually became inured to suffering, and the pains seemed less severe; that during the past few months a constant, dull, aching pain is that which gives the most annoyance. The paroxysms are still present, though modified. The patient herself was not in want, and it is reasonable to infer that medication, internal and external, has been well nigh exhausted. Having despaired of relief in this country, she went to Germany for the various baths, and after spending nearly a year without decided relief she returned.

An examination is made, and the limb found much atrophied, especially along the course of the main trunk of the sciatic, where there is a groove-like depression extending from the upper third of the thigh to the middle of the popliteal space. The thigh is flexed on pelvis, and leg on thigh, so that the foot rests on the toes merely. There is marked paresis, the patient not being able to raise the limb when she is in the recumbent posture. Deep pressure over the trunk of the nerve at its exit causes a little tingling in the distribution of the same, though there is so much adipose that this test is unsatisfactory.

What to do with such a case I was at a loss to decide. I actually feared that a current could not reach the nerve buried behind so much adipose. I did not see how she could come back and forth for daily applications. Finally I told the son that if he would bind himself to secure a carriage by the week, and bring the patient up every morning (Sundays excepted) for four weeks, we would undertake the treatment of the case, and let the patient have at least the benefit of the doubt. They went home to consider the question, and on the 11th she returned, ably escorted. Dr. Horst, who had

charge of the electrical room, made an application of a very strong current for fifteen minutes. To the fullness of his notes, and to his faithfulness in attention on the case, I am glad in this connection to acknowledge my indebtedness. To this strong current no pain was felt—the patient was simply aware of the contact.

12th. Current of same strength, and sitting of same duration, with like result.

13th. This morning there is marked improvement. She is able to stand alone, with *both feet squarely on the floor, and walk a few steps without assistance*. She is also able to raise the limb, declaring that this morning while in bed she held it up voluntarily about two minutes (emphatic about the time). Sensation has very markedly improved. This was also observed yesterday morning, though to a less degree. The same current to-day produces considerable pain, and when the current is interrupted she feels a sharp pain extend to the foot.

22d. Has been attending daily as directed, and the sittings have been from ten to fifteen minutes long. For the past few days she has been able to go up and down stairs—something she has not been able to do for five years or more. Is able to get into and out of the carriage unassisted. Has regained considerable voluntary power of the limb. Pains much diminished, though not completely dissipated.

25th. The weather is changeable to-day, and she complains of much pain. 26th—ditto.

27th. Feels remarkably well; walked alone from the carriage into the office.

29th. Much pain this forenoon, and the weather is inclement.

Dec. 2d. Has dismissed the carriage, and comes up in the street car. Is free from pain this forenoon, and feels well, although the weather for the past day or two has been damp and variable.

3d. Much pain this morning. Yesterday walked two blocks without any assistance. The thigh is increasing in size, and is gaining much strength. She did not come again, and on inquiring into the cause, I learned that she had been advised by a physician to purchase a faradic machine—"a battery for herself,"—have it applied at home every day, and thus do away with the necessity of coming up to the hospital. Accordingly she bought a small battery.

February 2, 1879. In looking up our cases I visited this patient,

and found her seated in a large arm-chair, *hors de combat*. She was scarcely able to get about, and her pains had returned. She had been using the faradic current until the battery got out of order. It had made her notably worse, and she feared to come back to the hospital lest she would not be received again for treatment.

This is suggestive enough, and comment is unnecessary.

It was my intention to report a few cases of sciatica of rheumatic origin, wherein both currents had been tried; but already my paper is longer than I had expected to make it, and I must content myself with giving the result of my observations. I believe that in neuralgias of rheumatic origin, the symptoms are, as a rule, aggravated by the galvanic current and benefited by the faradic. Even in symptomatic neuralgia, we have obtained much relief from the constant current; still it has been used with more caution here, and the treatment has been as a matter of course a mixed treatment. All of the cases of sciatica which I have reported in this paper had no medicine whatever. In the first place, the majority of the patients were unable to buy any; and in the second place, it was my aim to give the constant current a fair test. We have still a number under observation whose histories would but confirm overwhelmingly the results herein reported; but as sufficient time has not elapsed to study the question of relapse, I have retained them for a future report. Dr. Josselyn, of the hospital, is now treating several cases with the most happy immediate result.

One word with regard to the strength of the current we employ. In some instances not only has a lively erythema been observed around the electrode, but on removing the same there is occasionally seen (in two patients) an eschar. We have never found any bad effects follow currents thus strongly employed. The chief objection urged by electrotherapeutists to such a current, is the injury it may do neighboring viscera. In the treatment of sciatica after this method we have no viscera sufficiently neighborly to be affected; yet I want to be understood as appreciating fully the value of this objection.

RÉSUMÉ.—Fifteen cases were treated, and eleven of this number were cured, only one of which relapsed at the end of eight months under strong provocation. The remaining ten have not relapsed up to the present time.

Four of the fifteen treated were greatly relieved, but the relief was not sufficiently prolonged as to predicate of all a cure; still in two of the cases a cure of the sciatica seems to have been established, although a little stiffness remains as a remnant of the disease.

One case was of three weeks' standing, and was under treatment twenty-three days, with thirteen applications—the first six during the first week, the remaining seven at irregular intervals in the seventeen days following. *Result*,—cure and no relapse at the end of eighteen months.

One was of six weeks' duration, under treatment nine days, with eight applications. *Result*,—cure and relapse, with sufficient cause, at the end of eight months. Did not apply again for treatment, as the symptoms were not severe enough to justify him in giving up his work.

Two were of three months' duration: one, under treatment thirteen days, receiving six applications of the current, *resulting* in a cure, with no relapse at the end of eleven months; the other under treatment seven days, with five applications, and *resulting* in a cure, with no relapse at the end of eleven months.

Four were of four months' standing. The first, under treatment twelve days, eight applications, with a *result*,—cure, and not heard from in fourteen months. The second, under treatment twenty four days, eleven applications, with a *result*,—cure, and no relapse at the end of ten months. In this case there was an interim of eight days in which an intercurrent affection was treated. The third, under treatment sixteen days, seven applications, with a *result*,—cure, and no relapse after sixteen months. The fourth, under treatment thirty-eight days, sixteen applications, with a *result*,—cure, and not heard from in fifteen months.

One was of eight months' duration, but the number of ap-

plications is not recorded; at all events not more than six were made. *Result*,—cure, and no relapse at the end of eighteen months.

Two were of one year's standing. One under treatment twenty-five days, twelve applications, with a *result*,—greatly improved and practically cured. The treatment in this case was interrupted. The patient was heard from at the end of twelve months, and there had been no return of the acute symptoms. He is now attending to his work every day. The other, under treatment five days, four applications, with a *result*,—almost a complete cure; unable to find the present whereabouts of the patient, and ultimate results hence not obtained.

Two were of three years' duration. The first was eighteen days under treatment, twelve applications, with a *result*,—cure, and no relapse at the end of thirteen months. The second, under treatment four days, four applications, with a *result*,—temporarily relieved, but relapsed, and now suffering as severely as ever.

One was of five years' standing, and received about ten or fifteen applications—number not recorded. The *result*,—cure and no relapse at the end of ten months.

One was of seven years' standing, under treatment nineteen days, receiving fifteen applications. *Result*,—relief (see Case XV) to a remarkable degree; then a speedy relapse under the faradic current, which was used without our knowledge.

CONCLUSIONS.—The practical deductions to be drawn from the foregoing cases are simple enough. With a galvanic battery the practitioner has under control one of the most obstinate and harassing of maladies. Under his observation come all the recent cases, and with a practical knowledge of the constant current the neuralgia could be arrested before it becomes chronic, and at a stage of all others the most amenable to a judicious electrical treatment.

The battery need not be an expensive hospital battery. The ordinary Stöhrer, consisting of from eighteen to thirty-

two elements, would answer all purposes. In some of our cases, a small portable battery, manufactured by M. Boissier, of New York, has been used. This is a very simple apparatus, and possesses the advantage of being kept easily in repair.

So far as the direction of the current is concerned, I believe, with many others, that it makes little difference, though I have no cases recorded in which an ascending current was employed. From clinical experience I would advise the descending current. In our earlier cases we placed the positive pole over the lumbo-sacral region, and the negative over seat of pain. Latterly we have placed the positive over trunk of nerve at its exit, and negative over seat of pain.

It is best not to move the sponges from place to place during one sitting: the contractions which follow the breaking of the current prove too irritating to the nerve. If the pains are diffuse, it will be better to reach the distribution of a distinct branch at a single sitting. Next morning another branch can be embraced in the circuit. The sitting should vary from five to fifteen minutes, ten minutes being that in which the best results will be obtained.

NEW YORK CITY.

FOREIGN BODIES IN THE AIR-PASSAGES.

BY G. B. PRATT, M. D.

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A recent number of the London Lancet contains a report of a lecture delivered by George Johnson, M. D., F. R. S., on the above subject. He cites quite a number of curious cases of foreign bodies having lodged in the esophagus, larynx, trachea and bronchi, and gives the method adopted in each instance for their removal, closing with some general remarks on the physical signs, diagnosis and treatment of foreign bodies in the air-passages.

A perusal of this report has recalled to my mind several cases of this troublesome, and oftentimes very alarming accident, which have occurred in my own experience. It is not my intention, nor is it the object of this paper, to give a report of these cases, but to present to the consideration of medical men two important suggestions bearing on this subject.

I. The first thought to which I would direct attention is *the necessity of laryngoscopic examinations* in all cases, where the presence of a foreign body is suspected, or at all suggested, by the existing symptoms, unless the symptoms should be too urgent to admit of delay. Any one familiar with the anatomy of the throat, is aware that a morsel of food, or a small article, as a button, may so lodge in this vicinity as to be out of reach with the finger, and out of sight by simply looking in the mouth, when the laryngoscope would reveal its situation at once.

Many lives have undoubtedly been lost through the neglect of this means of diagnosis, chargeable in many instances to thoughtlessness, and in not a few to ignorance, on the part of the attending physician.

In illustration I will quote from Dr. Johnson the following case:—"An elderly man, an inmate of a prison, suddenly fell down while at dinner, and was supposed to be in a fit. When the surgeon arrived he found the man blue in the face, and breathing stertorously. Suspecting that there might be some foreign body in the throat, a probang was passed, and it was thought that something had been pushed down the gullet. The symptoms continued, and the man died in the course of the afternoon. After death a piece of tendon of meat was found under the epiglottis." Here the laryngoscope might have shown the true cause of the symptoms.

A somewhat similar case occurred in my hospital practice. I was summoned in great haste to see a man about sixty years of age, who had "fallen in a fit" while eating dinner. I found him lying on the floor just as he had fallen from his bench, his face livid, eyes prominent and staring, mouth wide

open, and head thrown back. He stopped breathing as I entered the ward; his pulse, however, was still faintly perceptible. Thinking he might have choked on some particle of food, I thrust my fingers as far as possible down his throat, but could feel nothing. Not being satisfied with this effort I seized his tongue with a napkin, and drawing it as far forward as possible, passed my finger down on one side and succeeded in dislodging a large piece of meat. The man immediately drew a deep inspiration, and in a few moments was feeling comfortable. In this case there was no time to be lost, and an examination with the laryngoscope was out of the question.

Large bodies lodging in the throat can often be felt by the finger or seen by looking in the mouth; not so in the case of small articles, as pins, needles, fish-bones, etc. But these may be readily perceived by the use of the laryngoscopic mirror, and removed with forceps. And in certain favorable cases, even when the foreign body has lodged in the larynx, especially the upper portion, it may be seized with a pair of laryngeal forceps, under guidance of the laryngoscope, and withdrawn.

Pieces of coin may be sucked from the mouth, by a sudden inspiration, and fall upon the glottis in such a manner as to almost entirely occlude the opening, leaving but a small space through which air may enter the larynx. In Dr. Sanderson's interesting case,* a man holding a sixpence in his mouth, while laughing suddenly fell to the floor suffocated. He rallied, however, and for two months went about his ordinary business, being attacked occasionally by fits of coughing and dyspnea, and at no time able to speak above a whisper. At the end of this time he was one day seized with a feeling of suffocation as urgent as immediately after the accident. As soon as possible after this, his throat was examined with a laryngoscope, and the coin was at once seen lying flat across the glottis, the edge in the ventricle on either side. There was a breathing space behind the edge of the sixpence, between the arytenoid cartilages. Numerous attempts were made to

* *Medico-Chirurgical Trans.*, Vol. 48.

dislodge the coin by holding the man's head downward, and slapping the back of his neck. This not succeeding, bent loops of wire were prepared for the purpose of jerking it out. But tracheotomy was finally resorted to, and the foreign body pushed upward. The man speedily recovered.

Sir Thomas Watson speaks* of a very similar case occurring in the practice of Mr. Henry Smith. A man while intoxicated put a half sovereign in his mouth, which immediately slipped into his larynx. The symptoms were pain in the larynx, a feeble husky voice, stridulous breathing, and cough with copious expectoration. A laryngoscopic examination discovered the coin lying flat upon the vocal cords. It was removed by the same procedure resorted to in Dr. Sanderson's case.

Druitt† says:—"The use of the laryngoscope is twofold; in diagnosis, and for the application of remedies. It reveals the presence of foreign bodies. By its use these troublesome intruders may be seen, seized and extracted." And Flint,‡ in writing on this subject, remarks that "the laryngoscope may be said to have, in a great measure, transferred the interior of the larynx from the domain of medicine to that of surgery, by rendering this part open to inspection. The presence or absence of foreign bodies may by this means be ascertained."

Dr. Cohen§ writes:—"The laryngoscope has, in the most literal sense, thrown light upon many an obscure condition which would otherwise have remained unrecognized, and have been liable to misinterpretation in the gloom of subjective investigation alone."

The following case, in which the laryngeal mirror was used with advantage, is an example of what might happen to any practitioner who neglected using this method of examination. A fine healthy boy, aged a year and eight months, was taken to Dr. Johnson by his parents, who said that two days before

* Watson's Practice of Physic, p. 275.

† Surgeon's Vade-Mecum, p. 464.

‡ Flint's Practice of Medicine, p. 269.

§ Diseases of the Throat, p. 12.

he had swallowed a copper penny. At the time of the accident he was black in the face; his eyeballs apparently starting out; and he seemed in immediate danger of suffocation. On the arrival of the medical attendant, these symptoms having somewhat subsided, he supposed that the coin had passed into the stomach. But as the child was unable to swallow solids, and the swallowing of liquids was attended with difficulty and excited coughing, the father became anxious and consulted Dr. Johnson. On the introduction of a small laryngeal mirror, the coin was seen sticking in the upper part of the esophagus. With a pair of long, slender, curved forceps, guided by the throat mirror, the penny was seized and extracted. Had this been allowed to remain, there is no doubt but death would have ensued from the extension of inflammation and swelling to the larynx.

Cases illustrative of the necessity of making laryngoscopic examination might be multiplied, but I think enough have been given to direct the attention of every thoughtful reader to this point. Setting aside the question of foreign bodies in the air-tubes, it is impossible for any one to treat affections of those passages skillfully and intelligently without the aid of such valuable suggestions as to diagnosis and treatment as are rendered by the laryngeal mirror. Therefore it is incumbent upon every practitioner to supply himself with the necessary apparatus (the cost of which is not great), and become conversant with its use. The best and readiest method of obtaining skill in the practice of laryngoscopy, is by acquiring facility in the examination of one's own larynx.

II. Although the following remarks are in reality a continuation of the same subject, my desire is to call attention to the great danger attending the practice so common among general practitioners, of passing a probang down the gullet, with the intention of crowding the foreign body, if any there be, into the stomach, without first using the laryngoscope to determine the nature and position of the offending particle, with a view to its removal if possible. It is true some of the

text-books advise this procedure. Thus Sir William Fergusson* writes:—"In certain instances, when a foreign body is known or supposed to be in the gullet, the best practice may be to push it down altogether with a broad-pointed bougie." But this was written before the introduction of the laryngoscope into the practice of medicine and surgery.

Dr. Cohen† mentions a singular case. He was called in consultation to see a man with chronic hoarseness of several months' standing. The story was that, about a year or rather previously, the patient had swallowed, during his sleep, a gold plate to which a false tooth was attached. The physician who was called in to the case felt the foreign body with his finger, and, failing to extract it, pushed it forcibly into the stomach. The patient was very feeble, and unable to eat or drink, every attempt at drinking being followed by ejection of the fluid in a paroxysm of spasmodic cough. An opinion was given that a fistulous opening existed between the esophagus and trachea. A post mortem examination revealed the gold plate lodged in the esophagus opposite the bifurcation of the trachea, with a communicating opening at this point. This man's life might have been saved had the plate have been bent up with a pair of strong forceps and withdrawn.

Sir William Fergusson had under his care a woman who, two months before consulting him, had while asleep displaced four false teeth which lodged in her throat. The doctor summoned, at once endeavored to push the teeth down the gullet by a bougie, and repeated the attempt day after day. Sir William found the mass impacted at the lower extremity of the esophagus, and was unable to remove it. No doubt the foreign body might have been readily removed when in the upper part of the gullet, had not the doctor's first thought been to *push it down*.

Dr. Johnson‡ says, in this connection:—"When a foreign body in the throat can be seen or felt, and reached from

* Practical Surgery, p. 651, 1852.

† Diseases of the Throat, p. 233.

‡ London Lancet, January, 1879, p. 2, Am. reprint.

above, an endeavor should be made to extract it, and not at first to push it down."

Dr. Cohen writes as follows (p. 237):—"When the foreign substance is one susceptible of digestion, and can not be removed by instruments, it may safely be pushed down into the stomach by means of a stout probang armed with a moistened sponge." He mentions a case in which a copper halfpenny had been swallowed by a child of five years of age. It was forced into the stomach. Enteritis followed, resulting in death. After citing several other cases, he says:—"Many other cases of similar nature are on record, showing the necessity that exists for making due attempts to extract a foreign body from the esophagus."

ELKHART, IND.

DO WE EVER CURE SYPHILIS?

BY C. A. BOYCE, M. D.

I know of no question which is more pertinent than the above, and upon which, in many instances, hangs the destiny of the children of thousands of families. I fear that physicians have not attached the importance that they should to the answers that they give in many cases to patients in regard to the possibility of their being still uncured, and liable to transmit syphilitic disease to their children in the event of matrimony. How often is it that a young man comes to his physician and tells him that he contemplates marriage, and wants to know if there is any chance of his having syphilis in his blood—wants to know if he will transmit the trouble to his children. Many more will come and tell the doctor to take them through a course of medicine, to get them purified and ready to marry. The responsibility is great, indeed, upon the doctor who gives a decided and unreserved opinion

in favor of any man's perfect cure after once exhibiting plain evidences of constitutional disease.

A great deal may be said on both sides of the question, and many cases may be referred to in which no return of symptoms have been seen after a lapse of considerable time; we must not, however, confound latency and eradication of a disease. Look at the children of consumptive parents, in whom the latent tubercular diathesis remains undeveloped for years and years, until the adventitious moment arrives, and they have been feeding their destroyer and warming it into life in their own bosoms, if I may use the expression.

Now the most provoking thing imaginable is to follow a writer who has no opinion of his own, but tells you what everybody else thinks, and keeps quiet himself. In the present instance I am "on the fence" myself, and I hope some of my medical friends will assist me to one side or the other. However I will state that, as near as I can come to the matter, I am strongly inclined to the belief that well developed constitutional syphilis *is never cured*.

My reasons for this belief are possibly shared by the great majority of the profession. They are based upon the general impress made upon the system by constitutional disease, the transmissibility of syphilis for generations, and the reappearance of symptoms from time to time when the disease has seemed to be cured. The occasion does not require that I should dwell at length upon these facts. I will only cite an example told to me at this time by a gentleman who is an old and experienced practitioner of this city; similar cases are, however, familiar to us all. He says that, many years ago, he was called to see a woman who had very severe syphilitic ulceration of the throat. He treated her with corrosive sublimate, etc.; she was apparently well in a month. Five years after he was called to see her again, and found the disease had made its appearance again, this time attacking and destroying the septum of the nose. Treatment mercurial, with apparent cure. Fifteen years after he was called to see the same party; this time she was troubled with a large and painful node on

the left radius. Mercury again (iod. potass. and iodine inunctions) relieved her. In the case related, the doctor thought on two occasions that his patient was cured; and even a lapse of fifteen years was not sufficient time to prove the case.

The practical point aimed at in this paper is *to come to a decision in regard to the facts of cure in syphilis*, so as to be able in great measure to stop hereditary syphilis by our counsel and advice. I am sorry to say that it is one of the few constitutional diseases upon which the physician is often consulted, by those contemplating marriage, to ascertain if they are still syphilitic; and it is the duty of the doctor to speak with the utmost truth in giving an answer, for he may be the cause of untold misery and suffering to the future descendents of that man. It is the physician's duty to discourage any marriage on the part of a person who labors under syphilitic infection; and who is able to say when a man has no syphilitic poison in his system, when he has once been thoroughly infected?

This is indeed a momentous question, and one which should claim the attention of the profession; for the advance and increase of the disease is so great, the methods by which it may be propagated and communicated are so numerous, and its cure so difficult and uncertain, that it is the duty of every one of us to be alive to any measure which may tend to eliminate so terrible a plague from our midst.

RICHMOND, VA.

LECTURES ON THE SURGERY OF THE FACE.*

BY FRANCIS MASON, F. R. C. S.

Surgeon and Lecturer on Anatomy at St. Thomas's Hospital; Hon. Fellow of King's College, London.

LECTURE I.—PART II.

It would be obviously impossible for me to enter into a full description of the different varieties of tumors that have been met with on the face. I can, therefore, only refer to a few which appear to possess more than ordinary interest.

Fatty Tumors.—These are rarely observed on the face, and the exemption in this region is remarkably illustrated in a case reported by M. Danez. At a post mortem examination of a man no less than two hundred and fifteen fatty growths were found in different parts of the body. The only situation that was quite free from such tumors was the face. I happen to know at the present time a gentleman who has at least sixty such tumors on the arms, legs and trunk, but he has none on the face.

The diagnosis of fatty tumors is not at all times easy, but a method has been suggested of solving the difficulty, which consists in applying ether or ice to the part, in the case of a doubtful tumor. If the growth is felt to become harder, the presumption is that the tumor is fatty.

Fatty tumors under the eyebrow have been mistaken for *nævi*, and a growth of this kind in the temporal region was regarded as an aneurism, for which the carotid artery was tied. Subsequently the patient died, and at the post mortem examination the true nature of the tumor was revealed. Fatty tumors are occasionally met with either in the substance of the cheek or lying immediately under the mucous membrane of the mouth. Four years ago I removed a small growth of this kind through the mouth. It was singularly non-adherent

* Delivered at the Medical Society of London, January, 1878.

to the surrounding parts, and consisted of soft fat. A tumor thus situated has been mistaken for a cyst in connection with Steno's duct, as in a case under Mr. Ward's care at the London Hospital.

Fig. 7 shows a glandular tumor in the upper lip, which I removed from a patient at the Westminster Hospital in 1868. The woman was forty-five years old, and was struck on the lip when she was four years of age. Mr. Goodhart has reported three cases of a somewhat similar character in the *Pathological Transactions*, Vol. XXVIII, p. 213.



FIG. 7.



FIG. 8.

Fig. 8 represents a tumor of a myxomatous character, which I took from a patient thirty-five years of age. It had been growing for about ten years, and was scarcely observable before operation, as he managed to hide it very cleverly with his whiskers.

Tumors invading the parotid region are of constant occurrence. Some of them are a mere temporary enlargement due to inflammatory effusion, as in this case [photograph shown], in which the swelling disappeared after the application of tincture of iodine and the adoption of an alterative constitutional treatment.

The more important tumors in this region, however, consist, as a rule, of mixed glandular and cartilaginous tissues, with here and there cyst formations. Such a case is shown in Fig. 9. The patient was under my care at the Westminster Hospital. The tumor commenced as a small nodule about forty years before he came under observation, and after removal weighed over four pounds.



FIG. 9.

The probability of return after removal of course depends upon the character of the tumor: for example, in some soft sarcomata recurrence takes place very rapidly, as in a case that was under the care of Mr. Barnard Holt, in which he performed two operations within twelve months. In other examples the growth increases slowly: thus, had Mr. S. Jones removed a pendulous growth from the parotid region of a patient, aged

fifty-eight, who stated that twenty-eight years previously a tumor had been removed from about the same situation. Perhaps one of the most remarkable tumors of this kind was that of which I show you photographs, operated on by the late Sir William Fergusson. I assisted at the operation, and the sterno-mastoid muscle was found to be spread over the tumor, which weighed nine and a half pounds. There was considerable hemorrhage.

Apropos of hemorrhage I may add, parenthetically, that in dealing with parotid tumors it is as well, as a last step before their final removal, for the surgeon to place a ligature on the vessel supplying the growth at the bottom of the wound. Without this precaution, the vessels are apt to retract, and are not easily secured afterwards. Even tumors having apparently a distinct pedicle often bleed very freely. Thus Mr. Hussey, of Oxford, removed a pendulous growth connected with the face weighing three pounds, from a patient aged seventy-three,

and the operation was, according to the report, attended “with profuse and almost fatal hemorrhage.”

It is alleged that complete extirpation of the parotid has been practiced, but, considering the anatomical relations of this organ, it seems almost impossible to effect its entire removal without serious risk to the patient. However, Dr. Valentine Mott states that the operation has been frequently performed; and M. Marzolo, an Italian surgeon, gives an account of the case of a woman, aged fifty, “from whom he had removed the entire parotid without injuring the facial nerve or the external carotid artery.” Sir William Fergusson, in recording his experience on this point nearly forty years ago, stated “that in no instance had he seen a case in his own practice to which the description of extirpation of the parotid gland was applicable;” and writing more recently, in 1870, he adds, “that when tumors near the parotid are small, that gland is slightly compressed, and when large most of it has disappeared.”

Sarcomatous Tumors.—Sarcomatous tumors, in their varied forms, are not unfrequently observed on the face. Fig. 10, taken from a photograph, illustrates a case that was under my care at St. Thomas’s Hospital two years ago. After its removal, Mr. Stewart, the curator of the museum, kindly examined the growth microscopically, and pronounced it to be a round-celled sarcoma. The tumor recurred within a year, and in a few months after, the patient died.

Another and perhaps rarer form of tumor is the *melanotic sarcoma*, of which I show you photographs.

This patient, a man aged sixty-four, was under my care at St. Thomas’s Hospital in 1872. He had a congenital mole, which gave no inconvenience whatever for over threescore years. The tumor commenced to grow from the skin quite close to the mole, if not from the mole itself.



FIG. 10.

The chief point of interest in the case was the probability of its recurrence, for there were several enlarged glands in the right submaxillary region, which I endeavored to remove, but the surrounding parts were so implicated that I was compelled to leave some of the disease. Nevertheless, the patient made a rapid and excellent recovery, and was quite well about a month ago, as I ascertained from his wife, whose letter, dated December 3, 1877, is appended to the photographs I send round. There has, therefore, been no return of the disease for a period of over five years.

Sir James Paget, in a lecture on tumors in connection with moles, refers to a case of somewhat similar character: The patient was sixty years old, healthy all his life, and very temperate, and in the site of the tumor there had been a mole as long as he could remember; it never gave him any trouble until about nine months previously, when, with some tingling, it began to enlarge, and continued to do so up to the time of his admission. Liston refers to another case in a patient aged forty.

Hypertrophy.—Hypertrophy of the integument of the nose—the lipoma of some writers—is not unfrequently observed. The growth appears to be an excess of the fibro-areolar tissue with some enlargement of the sebaceous glands. Many cases of the kind are on record, but one remarkable instance is reported by Mr. Pollock. The patient was a woman aged seventy-three, and the growth was eight inches in circumference, being the shape of an ordinary pear.

In very rare cases the external ear or pinna undergoes hypertrophy, but generally the enlargement is only temporary, and is due to the inflammatory thickening of the part. Boyer, however, met with a genuine case of hypertrophy, in which the ear was so large that it covered a great part of the cheek.

Horny Growths.—Horny growths occur on different parts of the face. They either consist of epithelium in various stages of dryness, or they may originate in the sebaceous follicles by a continuous proliferation of their epithelial contents. Mr. Canton describes a good example on the upper eyelid, and

Mr. Cock, of Guy's Hospital, another instance on the lower lip. And a third and still more interesting case is recorded in the Pathological Transactions by Mr. Charles Roberts, of York. The growth was taken from the face of a woman, aged seventy-five. And, lastly, this specimen of a horny growth from the museum of St. Thomas's Hospital is of considerable interest. The growth measured ten inches in length, and was removed from the upper part of a man's head.

Carcinomata.—The epithelial form of cancer is that most frequently observed on the face. It attacks the nose or the cheeks and lips, and relatively by far most frequently the lower lip. Sir Astley Cooper stated that, of two hundred cases that he had seen of this disease, in only one was the upper lip the seat of the affection. It is essentially a disease of adult life, for Lebert states that, of seventeen persons upon whom he operated for this disease, two only were under the age of thirty-five; and M. Fleury, of Clermont, observes that between 1845 and 1855 he had operated on eighty-six patients, seventy-one being men and fifteen women, and not one of them was less than forty-three years of age.

To show the comparative frequency of epithelial cancer, Mr. Erasmus Wilson remarks that, of two thousand cases of cutaneous disease, epithelioma occurred eleven times; in other words, about one in every two hundred. In twenty cases it was more than twice as frequent in males as in females. In two-thirds of that number it occurred after the age of fifty, several of the patients being above sixty, and its general duration at the time of coming under treatment ranged between two and fifteen years. In all the twenty cases the disease manifested itself on the face or its immediate neighborhood; in nine it appeared on the cheek; in eight upon the nose; while in one case it was developed on the eyebrow near its outer extremity, in another on the temple, and in a third upon the mastoid process.

Tobacco smoking is alleged to be a common cause of epithelioma of the lip. Roux held this opinion, but Fleury noticed the remarkable fact that all his patients came from a district where smoking was almost unpracticed.

Colloid cancer of the face appears to be very rarely met with, but one example occurring in the upper lip is recorded by Mr. Curling. The patient was a young man, and the growth had existed for five months. Dr. Andrew Clark examined the specimen microscopically.

One of the specimens on the table is a section of a skull projecting into the cavity of which is an encephaloid growth. It was taken from a patient from whom the parotid gland had been removed by Mr. Solly for encephaloid disease.

I regret that time will not allow me to enter fully into the different diseases of the jaws, although I fear that I could add but little to what Mr. Heath has published on the subject; but the tumors connected with these and other bones of the face may, I think, be reduced to a very simple classification. Thus:



FIG. 11.

1. We have cysts in the upper and lower jaws, of which I show you specimens from St. Thomas's Hospital Museum; and Figure 11 illustrates one form of such diseases, that in the lower jaw, the case having been under the care of Mr. Royes Bell.

2. There are the fibromata, or fibrous tumors, which usually spring in the upper jaw from one of two situations: either the interior of the antrum, or some portion of the alveolus. They are the commonest form of growth in the lower jaw. Cysts may be superadded to the fibrous structure, as in this case, of which I show you a photograph, of fibro-cystic disease involving the palate bones and palatal processes of both superior maxillæ. Mr. MacCormac was kind enough to allow me to take charge of this patient.

3. There are the different forms of sarcomatous tumors. Here are photographs, taken before and after operation, of a patient from whom I removed a spindle-celled sarcoma in April last. The tumor apparently commenced in the roof of the mouth, and subsequently implicated the antrum. An incision was made in the middle line of the upper lip, and the whole of the superior maxilla, excepting the orbital surface, with a considerable portion of the soft palate, was removed. [This patient was exhibited to the Fellows.]

4. There are the enchondromata, or cartilaginous tumors.

5. The osteomata, or bony tumors.

6. The carcinomata, of which the medullary or encephaloid cancer is the most common variety, although cases of scirrhus are recorded as involving both the upper and lower jaws.

7. Lastly, there are the vascular tumors.

A brief reference may now be made to the preliminary skin incisions which are generally employed at the present day in removing tumors of the upper jaw. Sir William Fergusson seems to have perfected the planning of these incisions, and I imagine that few surgeons would now think of gashing the cheek from the angle of the mouth to the external ear. Before applying the knife to the skin of the face, the surgeon should be quite sure that an incision is absolutely required, for many growths of small size, and cysts connected with the upper and lower jaws, may be operated on through the open mouth, without cutting the lip. Assuming incisions to be necessary, a considerable and often sufficient amount of room is afforded by dividing the upper lip exactly in the median line, carrying the wound into one or both nostrils. If more room is required, a second incision may be made upwards along the side of the nose, at the junction of the ala with the cheek; and a third may, if necessary, be employed, extending in a horizontal and somewhat curved manner under lower eyelid towards the zygoma. After the diseased part has been removed the cut surfaces may be united by the ordinary interrupted suture made of silk, which seems to me to be preferable to silver wire. In closing the lip, some surgeons

harelip pins and the twisted suture, but I fail to perceive that this plan possesses any advantage over the ordinary interrupted suture.

Dieffenbach seems to have been fully alive to the importance of not disfiguring the patient unnecessarily. Thus, in a paper on Resection of the Facial Bones, published in 1838, he says: "I began the operation by dividing the face in the median line, commencing between the eyebrows, and extended this incision downwards to the nose and upper lip; I then made a transverse incision parallel with the aperture of the eyelid, and separated the soft parts—*i. e.*, half the nose, the lower eyelid, the upper lip, and the cheek—from the tumor, and turned back the flap towards the ear." He adds that, by dividing the face along the median line, "I have suggested a new method of operation, the effect of which is to prevent the paralysis of one side of the face, the infallible consequence of commencing our incisions on the posterior part of the cheek."

Respecting operations on the lower jaw, I need only add that, if incisions are required in the skin, they should be so planned as to leave as little scar as possible.

The removal of tumors involving the greater part of the upper and lower jaws, by the subperiosteal method, has been practiced by Langenbeck, Signoroni, Ollier, von Pitha, and other continental surgeons; and cases are reported by Messrs. Bryant, Maunder, Quinlan of Dublin, Barwell, and others in this country.

Nævus.—Nævus is not unfrequently found in the face, and, when of rapid growth, may cause great disfigurement. It is met with, first, either as the cutaneous variety, as in this instance, situated on the ear (Fig. 12.) Secondly, it may be subcutaneous, and not involve the skin, when it is generally observed above the lips (see Fig. 13), on the cheeks, and over the parotid region. Or, thirdly, it may be of the mixed kind.

Nævus seldom produces displacement of the neighboring bones. Mr. Bryant, however, describes a case in which a nævus of the lip flattened the teeth of both jaws.

is not unusual to find two or more nævi on the same pa-

tient. Mr. Croly, of Ireland, reports a case in which there were four distinct nævi, one situated on the lower lip, a second in the right parotid region, a third at the back of the neck, and a fourth on the tongue. A still more remarkable instance is recorded of symmetrical nævi, the size of a sixpence, occurring in twins, male and female, eight years of age.

The question of operation is one of some importance, and before the surgeon proceeds to effect a radical cure, and thus perhaps produce a permanent cicatrix, he should not forget that many nævi disappear without surgical interference. The cutaneous nævus is especially the variety to which this remark applies. I do not think there can be a doubt that some nævi do wither away spontaneously, for they are very rarely met with in the adult.



FIG. 12.



FIG. 13.

With regard to the radical cure of nævi, I need not occupy time by referring in detail to the various methods of treating such tumors, whether by the application of continuous pressure, or by the actual or other form of cautery, or by obliterating the neighboring vessels by acupressure, as in a case reported by Mr. Bellamy, or by enucleation, as advocated by Mr. Teale, of Leeds, or by the use of the galvanic current, styptic injections, etc., but will conclude this lecture by alluding to some of the more complicated methods of applying the ligature.

Practically, these methods resolve themselves into two classes: First, those in which the skin is not included, a very important consideration when the nævus is situated on a conspicuous part, such as the face; and, secondly, those in which the skin is included.

FOREIGN CORRESPONDENCE—OUR LONDON LETTER.

LONDON, March, 1879.

MY DEAR YANDELL: The claims of the American Practitioner are again forcing themselves upon my attention; and I begin to realize that months after all pass quickly in other matters over and above paying one's rent. Still the pleasure of writing to you is sufficient to make one, in one sense at least, grateful that months are fleeting.

Knowing the interest you take in antiseptic surgery, especially in relation to the abdominal cavity, it is probable the communication made by Dr. Matthews Duncan to the Medical Society lately on 'Antiseptic Midwifery will best please you; so I shall give you an abstract of it. Among the different causes of puerperal septicemia, the poisoning of the patient from within herself, or by the hands of the accoucheur, is the most common. Antiseptic midwifery strikes directly at both these sources of danger, and, Dr. Duncan thinks, will reduce puerperal mortality more pronouncedly than all the other modern improvements put together. So far as he spoke that evening he engaged himself solely with the consideration of local treatment, and left out by design any review of the antiseptic treatment of the blood by the administration of antiseptics by the mouth. He proceeded to say that the nose usually furnished sufficient evidence of the putrefactive condition of the lochial discharge, but pointed out that the lochia of some women possessed an odor approaching that of putrefaction without being at all putrid. As to the mode of production of puerperal septicemia, he thought the putrefying liquor sometimes flows steadily into the circulation from the uterine sinuses into the veins of the broad ligaments; while at other times it is taken up by the lymphatics. The first thing to be done is to remove all decomposing material from the uterus and vagina by finger or forceps, if possible. If the putrefying substance be beyond reach by these means, and an intra-uterine antiseptic lotion thoroughly applied does not stop the putrescence, then an attempt should be made to introduce the carbolized hand to find, and if possible remove, the offending material. Then the vagina and uterus should be thoroughly washed out with the greatest care, and with the gentlest pressure that will be effective. In order to

secure gentleness of pressure, it is necessary to have a free exit for the fluid; and in order to secure this a double tube is essential. As to the pressure it could be procured from a basin of the injection fluid, held not too high, and a tube to the uterus. The instant the outflow is arrested, the injection must be stopped. It should be continued until the return fluid is quite clear. Such an antiseptic fluid could be made by a one in fifty carbolic acid solution, the lotion being lukewarm when used. The tube might be left *in utero* for a short time, but the idea of leaving it there continuously as a drainage-tube he reprobated, pointing out that such a tube would be a source of danger if not antiseptically plugged, and if so plugged it no longer was a drainage-tube. He did not think intra-uterine injection absolutely free from danger, and therefore the irrigation should not be unnecessarily repeated; and he thought about half a pint of the antiseptic fluid sufficient for each irrigation.

The dangers of such irrigation were confined exclusively to the irrigation of the uterus. The danger of propelling the intra-uterine lotion through an open fallopian tube had been demonstrated as a possibility. Such danger, however, is very small, and the chief danger is from poisoning. Such poisoning as only goes to the extent of producing dark-colored urine need not produce alarm. Serious poisoning might produce shivering and cyanosis, with a fast, weak pulse, and then the use of the lotion must be abandoned. Acute poisoning by the carbolic lotion is produced by the fluid finding its way directly into the venous system. The symptoms come on rapidly and resemble those of embolism, and consist of dyspnea, insensibility and clonic spasms, with a small and scarcely perceptible pulse. In order to prevent accidents by the lotion finding its way into the uterine sinuses, Dr. Duncan advocates the administration of ergot on the one hand, and the exercise of the greatest caution in irrigating the uterus on the other. At times hemorrhage follows the irritation, but this is usually the result of carelessness in the management of the irrigation.

Then Dr. Duncan proceeded to discuss antiseptic midwifery from its prophylactic side. This is undoubtedly the most interesting aspect of the subject. In the first section of the paper, the management of a case of established puerperal septicemia was discussed; in the latter section the prevention of such an untoward accident, by the adoption of antiseptic precautions, was reviewed. He did not support the view of conducting confinements under the spray.

For the application of the Listerian method to midwifery, it would be necessary to procure preliminary disinfection of the vagina and cervix uteri; then the confinement would have to be carried on in the face of the fact of the near proximity of the anus as a source of danger. He thought that the Cesarian operation could not be carried out antiseptically so completely as ovariectomy could, because the natural orifice was a source of danger, and propagation of sepsis from or by the vagina was readily attained. The disarrangement of the sutures by the uterine movements would also interfere with the plan of treatment. Already in a number of the maternity hospitals of the Continent the use of antiseptics has greatly reduced the mortality, and the introduction of the plan into private practice promises to do much to save life. In the Royal Maternity Hospital of Edinburgh, what may be called carbolic precautions were used in addition to ordinary cleanliness. All washings of the pudenda are done with carbolic water. Consequently the sponges and the hands of the attendants are consequently kept antiseptic. The ointment used in vaginal examinations is carbolized. Physicians and students alike wash their hands in carbolic lotion. In Basle, a three per cent. lotion is used for the hands, and a ten per cent. ointment for anointing the finger, or the hand or instrument, if the latter be used. All lacerations are sutured, and a dossil of charpie, soaked in ten per cent. oil, is placed in the vaginal orifice, and renewed as often as it falls out, or after urinations or injections. These precautions are used for twelve days; the injections, of a two per cent. lotion, being made twice daily. The importance of free evacuation of the lochia is also insisted upon.

Dr. Duncan then proceeded to consider the conveyance of infection by nurses or doctors. The adoption of antiseptic precautions ought to produce something approaching absolute assurance of safety; and the medical man can quickly make himself medically clean in hands, person and dress: he should, however, avoid undertaking the duties of nurses, and of using the hands in post mortem investigations. Then, as to the last subject—danger from within—he is opposed to the use of intra-uterine injections in natural cases; and the leaving of a drainage-tube in the passages will be, he thinks, a source of danger. He holds that it is doubtful if ever the danger from within arises spontaneously, but is always, or almost always, imparted from without, and that too even in the presence of an epidemic. Still Dr. Duncan does not hesitate to secure evacuation

of the uterus when lochia are retained, and to use antiseptic cares if there be any discernible occasion for them.

Finally, comes the antiseptic management of the child; and for it the same prophylactic and therapeutical antiseptic cares are as valuable as for the mother. The child is liable to infection through its umbilical cord, either from ulceration or the cord becoming putrid. The delicate organism of the child is much more easily poisoned than the more mature system of the mother. Consequently antiseptic dressing of the cord is a matter to be carefully attended to.

Prof. Rutherford, of Edinburgh, has concluded his report on the action of cholagogues, conducted for the British Medical Association. After having given his experiments, performed by himself and his assistants, as to the action of ipecacuanha, salicylic acid, chloride of ammonium, etc., he concludes by comparing the information furnished by clinical observation and physiological research into the action of drugs upon the liver, and in the formation of bile. He showed how difficult it was in man to determine betwixt the "secretion" and the "discharge" of bile. Certain purgative agents, like sulphate of magnesia and castor oil, which stimulate the intestinal canals, actually diminish the amount of bile. He is very much inclined to hold the view that ipecacuanha is of service in the treatment of dysentery from its action upon the liver, and that the presence of bile in the intestines affects them favorably. He finds there are direct hepatic stimulants, and direct hepatic depressants; that is, agents which increase the activity of the liver, and those which diminish its activity. Of course he is careful to point out that results attained by experimentation on the dog must not be applied directly to man; but says that the information afforded by such experimentation is useful in explaining the results attained by clinical investigation. Thus the experiments made as to the action of calomel, show that there is no real discrepancy between the observations of the physiologist and those of the clinical observer, who knows that its administration is followed by an increased discharge of bile. As to the introduction of the different substances, experimented upon, into the duodenum of the dog, whilst they must be given by the mouth in man, Prof. Rutherford says, if our results had not been in harmony with clinical experience, then it would have been permissible to harbor suspicions as to the value of the method adopted. He ventures to hope that they have laid the

foundation of a rational, that is a scientific, treatment of many of the diseased conditions of this organ, by the light thrown upon the action of certain remedies on the liver; and concludes by an eloquent defense of the aims of physiologists from the bitter and virulent attacks made by the clamorous rage of sentimentally inspired ignorance.

I may, perhaps, be permitted to conclude this letter by a quotation from the Hunterian oration, recently delivered by Professor Humphry, of Cambridge. He says:—"What is really wanted, and what teachers and examiners must combine to promote, is, to use the language of the 'laughing philosopher,' Democritus, who was one of the greatest thinkers of antiquity, that 'we should strive, not after fullness of knowledge, but fullness of understanding;' that is, that we should strive for good, clear, solid, intelligent, producible and available knowledge of the kind that will be useful in after-life; not so much the refinements of chemistry, anatomy and physiology, which, in their aggregate, are likely to perplex, encumber, stupefy, and then pass away like chaff before the wind; but the essential, fundamental facts and principles welded together, and so woven into the student's mind that he can hold them firmly and wield them effectually; and that he is conscious of them, not as the goods of other men, or as dogmas which he has because they were imposed upon him, but as his own possessions, of which he appreciates the value because he knows how to use them. 'The knowledge that a man can use is the only real knowledge, the only knowledge which has life and growth in it, and converts itself into practical power. The rest hangs like dust about the brain, or dries like rain-drops off the stones.' (Froude: *Short Studies on Great Subjects.*)"

Surely Froude had had the present medical education in his mind's eye when he penned that pregnant sentence.

J. M. F.

Reviews.

Diphtheria—Its Nature and Treatment, Varieties and Local Expressions. By MORELL MACKENZIE, M. D., London. Philadelphia: Lindsay and Blakiston. 1879.

This is a neatly printed duodecimo volume of one hundred and one pages. From the author's position, ample experience, and special line of study, we naturally expect that what he sees fit to write about will be written well, and that he will furnish us with the latest and best digested data upon the subject in hand. Our anticipations in this regard are more than realized in the work before us. It is not claimed to be an elaborate treatise upon diphtheria; and while we can not conscientiously say that the work furnishes us anything in the way of novelty or originality, we must admit that we have never seen its equal as a full, fair, concise and honest résumé of the subject concerning which it treats. A perusal of this, the latest of Dr. Mackenzie's lucubrations, will hardly occupy two hours, and we guarantee that they will be two hours very profitably spent. We find in it a condensation of all the known facts concerning diphtheria, as regards its history, etiology, pathology and treatment; due prominence being given to what is positive and practical, but little attention being bestowed upon what is purely theoretical and conjectural. We are given the very gist of the subject in the fewest possible and plainest words. We are presented with the kernel and the fruit ready prepared, without being called upon to delve through the shells and the husks wherein they may lie concealed.

The work is divided into twelve chapters: Chapter I is devoted to the definition and history of Diphtheria; Chapter II to Etiology; Chapter III to Symptoms; Chapter IV to Paral-

ysis incident to Diphtheria; Chapter V to Diagnosis; Chapter VI to Pathology; Chapter VII to Prognosis; Chapter VIII to Treatment; Chapter IX to Laryngo-Tracheal Diphtheria (or Croup); Chapter X to Nasal Diphtheria; Chapter XI to Secondary Diphtheria.

The history of diphtheria is given succinctly, and develops satisfactorily the conclusion that far from being a modern affection, it can be traced away back into the dim ages of the long past. It is almost as hoary in its antiquity as the leprosy of biblical fame. "A rose by any other name will smell as sweet." If the disease was not known under its present fancy title, as many households were robbed of their idols by its ravages in the far-distant ages of the past, as they are at the present day. Aretæus was as clear in his account of it, if not as learned, as Bretonneau. The Talmud and Old Testament give as faithful a portraiture of this scourge, for all practical purposes, as do Ziemssen and Flint. A careful perusal of this portion of Dr. Mackenzie's monograph will amply repay any one interested in this kind of research. Step by step the onward march of diphtheria is traced from ancient to modern times. Its varying degrees of severity as to times and places is concisely stated, and powerfully impresses one with the thought of how much havoc this disease has spread in days gone by, and how much it is capable of in those to come.

The chapter on etiology is full and accurate, and gives, as far as known, all that concerns this branch of the subject. The exciting cause of diphtheria is a specific contagium. Cases which seem to originate *de novo*, if followed out can always be traced to previously existing ones. As a strongly predisposing cause of diphtheria, tender age plays a prominent part. The accidental existence of pharyngeal catarrh, or of any disease which lessens vitality, increases individual receptivity. Family constitution also has an unfavorable influence. Just right here we might remark that in our own experience—not by any means limited—we have never seen a case of genuine diphtheria in a perfectly healthy child, and one entirely clear of strumous taint. To our thinking struma

must never be left out of view as one of the essential determining causes of diphtheria. The contagious principle of diphtheria has not been isolated. It is probable that it consists of small particles of matter floating in the atmosphere—call them what we may, fungi or bacteria. The author considers the germ theory of diphtheria *adhuc sub judice*. While low vegetable organisms may possibly play an important part in the propagation of the disease, their exact relationship has not yet been fully made out. The observations of Oertel, Hueter, Letzerich, and others, only show that micrococci are invariably attendant upon diphtheria. The relation of cause and effect between the two has not been demonstrated: while bacteria can always be found in and around diphtheritic deposits, that they are the sole, or even the main agents in the causation of such deposits, yet remains to be proved.

Inasmuch as the disease so often arises in connection with bad drainage, foul habits and impure water supply, and as it is often impossible to trace the remotest channel of contagion, these facts lend color to the idea that diphtheria can and does originate *de novo*. But the whole tendency of modern teaching and sanitary science combat the doctrine of spontaneity in the origin of specific diseases. It must be borne in mind that in those instances where the disease seems to enter the system through foul drainage or drinking water, the specific germs of diphtheria derived from persons previously the subject of it may have found their way into these channels of contagion. Various instances are given by the author, where these difficulties of tracing the disease to its source presented themselves, but which were surmounted by careful investigation into the facts.

Diphtheria prevails in every country, but is most common in temperate climates. Its material of contagion lives under ordinary atmospheric conditions, but *dampness* favors its development. It is found in the tropics, but it has not been noticed in the Arctic regions. The germs of the disease may lie dormant external to the body for a considerable length of time, and may only develop into activity under the stimulus

of some peculiar atmospheric condition, or when a suitable nidus presents itself. The author has known the poison to thus remain dormant for four, seven and fifteen months, and in one instance for three years, and then to become active. In Great Britain diphtheria has been more prevalent in parts where the rainfall is great, in valleys, or in points where the surface drainage is defective; but at the same time it has shown great epidemic persistency in high, dry, and exposed situations.

The disease seems to prefer rural to urban districts. The author quotes authority for the statement that the number of fatal cases of diphtheria in the rural districts is nearly three times that in urban portions of the country. He hazards the suggestion that those conditions which seem to promote fungoid growth would appear to favor the incidence and persistence of the disease. The comparative immunity of towns from the prevalence of diphtheria as compared to the country, may be traced to the presence in towns of something in their atmosphere inimical to fungoid growth.

Formerly the extension of diphtheria was considered to be independent of seasons, but the weight of testimony tends to show that it prevails more extensively during the winter months than at other periods of the year. Many epidemics, however, have steadily raged throughout the whole year, in spite of the most varied atmospheric changes.

As regards the mode in which the diphtheritic poison is diffused opinions differ. Direct contagion from person to person must be rare, inasmuch as it is extremely difficult to effect artificial implantation of the deposit. This fact would seem to indicate that the contagion, when set free from an affected person, undergoes further development (as in the case of cholera and typhoid fever), which increases its morbid properties. Cases have been reported in which the poison has been conveyed by a person not actually affected by the disease. That it is portable through the agency of fomites can not be doubted. When the disease exists endemically or sporadically, the contagion does not assume a virulent form, and proper hygienic

measures are invariably successful in confining it to a limited area. The distance at which the contagious principle of diphtheria can operate is, as a rule, more limited than is the case in typhus or variola. Under other circumstances, as when diphtheria is epidemic, the contagion is highly virulent and may be wafted over extensive tracts of country. The poison of diphtheria may be transmitted from one person to another, first, by direct implantation of the germs in the deposit; second, through the circumambient air; third, through the water that is drank or the food that is eaten; fourth, it is possible that the poison may be introduced by inoculation, either with portions of false membrane or with the blood of an infected subject. The period of incubation is very short, generally from two to three days, but it may occasionally be for so long a period as two or three weeks.

The most obvious predisposing cause of diphtheria is age. In an analysis of seventy thousand fatal cases contained in the returns of the Registrar General, children from one to five years of age gave four hundred and fifty in one thousand; those from five to ten years gave two hundred and sixty in one thousand. As age increases the ratio diminishes. In the Florentine epidemic of 1872-73, in fifteen hundred and forty-six cases, in only fifteen were the patients over thirty years of age. While the disease very rarely attacks children at one year of age and under, such is not always the case. Cases have occurred in which very young children at the breast have suffered from it.

Social position has but little if any influence on the distribution of the disease. While it is true that in its endemic form those who are so situated as to be surrounded by proper hygienic regulations are rarely attacked; nevertheless when the disorder is widespread and epidemic, these latter favorable conditions seem to be of no avail against its inroads. Statistics from various authorities tend to demonstrate that during an epidemic of diphtheria no importance is to be attached to the hygienic condition of a locality as a cause of the malady. Numerous are the instances in which many persons have fallen victims to diphtheria who lived in affluence, and in lofty, well

ventilated, and in all respects salubrious dwellings. When diphtheria becomes epidemic in a locality an elaborate system of drainage or sewerage may be the means of disseminating the poison, as sewers and water-closets afford a ready means of contaminating the surrounding air and drinking water. From this it is not difficult to understand why the poorer classes may escape a danger which the wealthy are threatened with from the nature of their luxurious conveniences.

During the existence of an epidemic the accidental occurrence of a catarrh seems to attract the specific virus to the throat, and people the subjects of enlarged tonsils and relaxed throats are specially liable to contract diphtheria. The latter fact seems to point to struma as a strong determining cause, as we have before remarked. One attack of diphtheria probably affords a protection—though a very slight one—against recurrence.

In treating of the symptoms of diphtheria our author is particularly happy. No hurried summary can give anything approaching a full measure of justice to this portion of the work—and luckily such an attempt is not necessary to any practitioner who has been so unfortunate as to have seen much of this terrible malady. When at all virulent it tells its own story with no uncertain sound. Its symptoms vary in different cases from those of quite a slight sore throat to those of the most malignant blood poisoning. The presence of the “false membrane” in the throat is the characteristic symptom, but in slight cases the disease may subside before its formation becomes decided, and occasionally the patient dies before it is developed. In some cases there is decided inflammation, while in others there is scarcely a trace of it.

Dr. Mackenzie divides diphtheria into six different constitutional forms,—first, the typical form; second, the mild or catarrhal form; third, the inflammatory form; fourth, the malignant form; fifth, the gangrenous form; sixth, the chronic form. All of these forms may run into one another, or their special features may be more or less combined. The differences dependent on the site of the affection are,—(*a*) nasal diphtheria; (*b*) laryngeal diphtheria or croup.

This review would occupy too much space were we to attempt to summarize the author's exceedingly lucid account of the symptoms attendant upon the various forms of diphtheria. A just estimate of how he has accomplished his task can be found only by an attentive perusal of his admirable monograph.

To the various paralyses incident to diphtheria a special chapter is devoted. This portion of the work accords fully with the others in clearness and conciseness. Statistics and researches collected from various sources show that paralysis of some sort is attendant upon diphtheria in about 10 per cent. of the whole number of cases. But this proportion varies considerably in different epidemics. The kind of paralysis is also varied. It may be partial or complete—may limit itself to single groups of muscles, or may involve the whole voluntary muscular system. The advent of paralysis is always gradual, and as a rule it occurs during the second or third week after the complete disappearance of the local lesion. Paralysis may however occur, though rarely, before the disappearance of the false membrane; on the other hand, it may be delayed as late as the sixth week of convalescence. Its advance is gradual, and it may continue to extend for weeks after its first appearance. The muscles most commonly affected are those of the soft palate and pharynx, of the eye and the extremities. Paralysis of the larynx is an occasional occurrence, but is much less common than the other palsies. Recovery from paralysis following diphtheria, however marked it may be, may almost invariably be counted upon. It disappears in a period varying from six weeks to six months, as a rule, gradually, in the order in which it appeared. The author lays stress upon the danger incident to his cardiac syncope and the extreme debility as concomitants of diphtheria as warnings to the practitioner in the management of his cases, and to the patients as regards undue exertion during or following an attack of the affection. It is possible that a careless practitioner might lose a case of diphtheria without being at all cognizant of its nature. On the other hand we have in our mind's eye not a

few of our craft who are in the habit of calling every case of ordinary tonsillitis and sore throat by the fearful name of diphtheria. The former errs through positive ignorance; the latter is guilty of deception for selfish ends. To both we refer our author's chapter on the diagnosis of diphtheria as eminently worthy of their attention.

The chapter on pathology gives an admirable résumé of all that is known at the present day concerning the nature of the disease in general—the special “false membrane,” the local complications, the cardiac syncope, the paralyses, and the morbid impress which diphtheria has upon special organs and systems.

The mortality of diphtheria varies chiefly according to the age of the patient, the character and stage of the epidemic, and the parts involved. The relative proportion of deaths to cases is not at all constant. In some epidemics the death rate has exceeded 50 per cent. The dangers most to be feared in diphtheria at the outset are, on the one hand, extension of the disease to the larynx, and on the other severe blood poisoning. In the one case the patient may die rapidly from asphyxia, and on the other from collapse, or may rapidly sink with typhoid symptoms. At a later period a fatal result may be brought about by repeated attacks of syncope, by general prostration without manifest cause, by constant and uncontrollable vomiting, by severe hemorrhages, or by inflammatory complications, such as pneumonia or nephritis. Death during apparent convalescence may be caused by paralysis of the heart or the inspiratory muscles, from intercurrent disease of the lungs and pleura, or from general failure of nerve force. As a general rule the most trustworthy data upon which to form a prognosis in diphtheria are those which relate to the character and mortality of the prevailing epidemic. The author states as a rule that of the cases in which a definite false membrane is present, one-third, at least, will probably prove fatal. As stated before, the more the disease attacks young children, all the more may we expect death to be the result. The special symptoms upon which to found a prognosis in any

given case are: high temperature, extreme prostration, hemorrhages, and urgent vomiting. These are symptoms which point to extensive general infection, and are of very grave prognostic import. The prognosis is bad in proportion to the thickness and extent of the false membrane exudation. When the exudation seems disposed to extend rapidly the danger is considerable, as such extension is most likely to produce asphyxia by blocking the larynx and trachea. Albuminuria, a very common symptom, has no serious prognostic import.

The chapter devoted to the therapeutics of diphtheria is decidedly the best in the book. It is not burdened with a formidable array of authorities, and the author shows a well judged eclecticism by furnishing those views which have best stood the test of time and experience. All treatment of this malady should at the outset be based upon the fact that as regards the general condition of the patient it is the *intensity* of the morbid changes which constitutes the great danger, and that locally the risk lies in *the occurrence of the exudation in a perilous situation*. The limits of this notice will not allow of doing anything more than sketching this portion of the monograph.

As regards the general treatment of diphtheria great stress is laid upon husbanding the patient's strength by food and stimulants, and placing him under the best hygienic influences. The administration of alcohol is regarded as almost always advisable. Depletion—local or general—is not to be thought of. Favorable mention is made of Sir William Jenner's plan of always commencing treatment of diphtheria by a preliminary purge of calomel with jalap.

The general remedies for diphtheria which are recommended are: first, the recuperative agents; second, the alleged specifics; third, the antiseptics; and fourth, the expectorants.

Of the recuperative agents iron and quinia are most entitled to consideration. The tincture of the perchloride of iron is the agent preferred, and should be given with no sparing hand. High temperature, headache, vomiting, and other symptoms of septic poisoning, are the main indications for the salts of bark.

Of the alleged specific remedies mercury, sulphide of potassium, bromine, and the balsams of copaiba and cubebs very little is said that could induce one to believe that such remedies are endowed with anything like specific curative action. A trial of them has yielded but negative results.

The general antiseptics include iron, chlorate of potash, carbolic acid and salicylic acid with its compounds. The weight of evidence is still very much in favor of chlorate of potash for its local and general effects. In the general septicemia of diphtheria, carbolic acid and the sulpho-carbolates have proved of service. Salicylic acid and the salicylates are strongly recommended.

The expectorant remedies—senega, ammonia, and the balsams—have not found much favor.

As regards the local treatment of diphtheria, this has varied at different times, and at the present great divergence of opinion exists regarding it. Caustics and astringents, solvents and antiseptics, cold and heat, have each been favored at various times and by various observers. The author, guided by his own and the experience of many others, puts the use of the strong caustics to the throat under the ban of his sharpest protest. They are both useless and injurious. They are useless because they have no effect in contracting the spread of the deposit, and injurious because they give pain and rather aggravate than check the local process.

The astringents, such as tannic acid, alum, and perchloride of iron, each have their advocates. Preference is given over all to the tincture of the perchloride of iron as a topical astringent.

Local agents which act as solvents of the exudate have found no little favor in modern times. The chief of these are lime-water, solution of caustic potash, chlorate of potash and lactic acid. That some of them have a solvent power over the membrane the author sees no reason to doubt. He gives preference to lime-water in the form of spray, and to lactic acid applied to the throat pure with the camel's hair-brush. Lactic acid applied in this way is thought to be the most reliable of all solvents. In most cases antiseptics are very useful.

The best are carbolic acid, permanganate of potash, chlorinated soda, glycerin of borax, and hydrate of chloral. As an antiseptic local application, chloral syrup—twenty-five grains to the ounce—is spoken of highly. It is stated that after its use that “whilst it rapidly gets rid of the fetor, it is beautiful to see the membrane loosen and come away, leaving a healthy surface underneath.” Whatever antiseptics are used should be administered as gargles or in the form of spray. The local uses of ice and steam, of heat and cold to the throat, are given prominent mention as powerful agents for good—ice in the first stages of the affection, and hot applications in its later stages. Each have their proper place and proper time for use, both of which are aptly illustrated and pointed out by the author.

As a piece of powerful logical reasoning the chapter on laryngo-tracheal diphtheria (formerly called croup), is worthy of special mention. Whatever lingering doubts any one might have as to the clinical and pathological identity of croup and diphtheria will certainly be dispelled by our author’s sledge-hammer way of stating the case. That membranous croup is diphtheria we have not the shadow of a doubt. Even should such a doubt have ever entered our minds, Dr. Mackenzie’s way of reasoning would certainly woo and win us from it.

We have given some space to a review of this admirable monograph, but its high degree of merit really deserves much more. It should be in the library of every practitioner. To all who wish to keep themselves *au courant* with the vanguard of progress, it is indeed a very gem of the first water.

C. R.

Yellow Fever. By THOS. O. SUMMERS, M. D., Professor of Anatomy and Histology in the University of Nashville and Vanderbilt University. Nashville: Wheeler Brothers. 1879.

Time was when some medical men could, *ex cathedra*, establish theories of disease that would be accepted by the profes-

sion, but that time is passed; to-day no one, however eminent, can promulgate a fresh doctrine and have it received as true and acted on by physicians until it is proven. Yellow fever rightfully claims large attention at this moment, and any observations, whether personal or collated, that are exact and reliable, will find ready appreciation. The author of this monograph details his personal experience, obtained in Memphis during the epidemic of 1878, and the conclusions to which it has led him; but his observations do not have the flavor of exactness, nor his conclusions the tonic inspiration of reliability. For example, this, on p. 12:—"Yellow fever is a zymotic or fermentative disease, and as all fermentation is set up by small organisms, so do all the manifestations of the disease in the human system depend upon the deposit within the blood of living organisms, which in their growth and development produce the morbid changes which characterize the course of the malady." This is an immense declaration, but nothing other than assertion is presented to sustain it: it may be true, but can not be accepted on the *ipse dixit* of any one.

Again, on page 43, speaking of the pulse, this: "Under the finger it is very compressible and rolling, just as though air bubbles were chasing each other along the arterial current, giving rise to the term *gaseous pulse*, the appropriateness of which can only be appreciated by those who have felt the peculiar sensation imparted to the finger. Nor is this a mere *term of resemblance*; for the fermentation in the blood is now at its height, and the carbonic acid *is set free* to such an extent as in reality to fill the current with bubbles." And to this also must be entered the Scotch verdict, "not proven." By the way, may not one appropriately, if not anxiously, inquire how the heart and greater arteries manage to keep these bubbles from accumulating in great bulk, and how the heart and capillaries would act in the presence of a great volume of mephitic air in their interior?

A third quotation is selected from page 9, where the author speaking of the fever, says:—"That it is confined to low, flat regions, has been, by the late fearful epidemic, which has de-

vastated our southern country, forever set aside. That it depends for its existence on the neglect of sanitary measures has been alike demonstrated to be utterly unfounded in fact, and the vaunting boasts of local boards of health who, because living in places not reached by the infection, lay the flattering unction to their souls that they have by any steps taken by them prevented its prevalence, must seem highly amusing to those who have seen its fearful ravages in places remarkable for their natural cleanliness and for their strict hygienic regulations."

Giving to these announcements such place as they seem to deserve in the light of the present methods adopted by leading scientists in investigating and reporting the general and clinical history of epidemics, including their pathology and morbid anatomy, one is forced to the conclusion that the book under notice does not add anything of value to our knowledge of yellow fever.

The typography and general make-up of the volume is not such as to create the idea that the art of medical book publishing has reached perfection in Nashville.

J. F. H.

Fowne's Manual of Chemistry, Theoretical and Practical. Revised and Corrected by HENRY WATTS, B. A., F. R. S. Edited by ROBT. BRIDGES, M. D., Professor of Chemistry in the Philadelphia College of Pharmacy. Philadelphia: Henry C. Lea. 1878. 12mo., pp. 1007.

This new American, from the twelfth English edition, has been much enlarged by the revision it has undergone, notwithstanding the fact that the portion relating to physiological chemistry has been omitted. The high standing which this work has always held is fully sustained in the present edition, and Mr. Watts's elaborate revision brings it abreast with the most recent chemical researches. There are one hundred and seventy-seven illustrations. The type is small, but it is better for the sake of convenience that it should be so, than have two volumes as in the English edition.

A New Treatise on Assimilation and Digestion—Showing the different Solvent Juices and Fluids; their Origin and their Uses in the Human System; the Glands from which they are Secreted, and their Realtion to each other. By JOHN WESLEY EVANS, M. D. Quincy, Ill.: Daily Whig Book and Job Printing House. 1878.

A little learning is a dangerous thing, but there may be a degree of littleness that is insufficient to raise the idea of danger, and that excites only pity that a man who promulges that he has practiced medicine for more than thirty years should be willing to publish a book, which, on every page, illustrates not only his lack of learning, but also his want of common sense.

Setting out to enlighten the profession, the author flounders through the fields of physiology in a distressing manner; and on p. 53, produces this astonishing paragraph:—"My theory is as follows: The splenic* artery conveys the blood into the spleen, which manufactures the gastric juice direct from the blood, and conveys it by a large number of small arteries into the inner coats of the stomach; and those small follicles, or cells, or sacks, that are heretofore mentioned, are merely deputies* of the gastric juice. So that when food is received into the stomach it is there *ready* to answer the requirements of nature." And on p. 110, this—"The simple structure of the spleen, as we before said, separates the serous from the resamentum* portion of the blood. When the spleen becomes inflamed, and the grape-like appendages of the arteries are congested with cacen* from the blood, there will be a surplus of the blood highly charged with gastratin* in the vena patarum,* and the hepatic artery, and become assimilated by the liver into bile, and then pass into the general circulation, until the system is surcharged with bile and jaundice is the result."

Dr. Evans closes this little volume with a paragraph announcing that this publication is intended to be introductory to another work, on practice, which shall be a detail of his

* Mark the orthography of technical terms. The printers probably kept common words correctly spelled.

experience in over thirty years' labor in that line. If this notice of his present work shall fortunately aid in preventing the issuing of that promised, it will have been instrumental in stopping the press from the production of a mass of crude nonsense, clothed in uncultured diction of inappropriate words used and arranged in utter disregard of the commonest grammatical rules.

J. F. H.

Horseback Riding from a Medical Point of View. By GHISLANI DURANT, M. D., Ph. D. New York: Cassell, Peter and Galpin. 1878.

This book sets out to tell how we are made physically and spiritually, and does it after the manner of the ancients, drawing inspiration from Plato, Hippocrates and Galen, Stahl, Boerhaave and Hoffman. Then follows an explanation of medical gymnastics, delineating the nature and value of various corporal motions. Succeeding this is a learned elucidation of horse movements and how they promote the horse-rider's physiological activity, remedy pathological disturbances, and produce hygienic effects generally and superlatively, the whole being a very roundabout, and not particularly attractive nor instructive way of advertising that horseback riding is an agreeable and healthful exercise, a proposition that will be accepted as true without reading the author's pretentious little book.

In the final chapter the author essays to teach that horse-racing was inaugurated by Hercules and his four brothers running a foot-race for a prize, and to drive away *ennui* while lazily superintending the education of Jupiter, a duty with which they had been charged by Rhea. This was a long time ago and far removed from the Bluegrass region, and it might test the powers of the sharpest evolutionist to trace the line of descent to John Harper and his matchless Longfellow.

J. F. H.

PROCEEDINGS OF SOCIETIES.

TRANSACTIONS OF THE CINCINNATI MEDICAL SOCIETY.—At a stated meeting of this society, held February 11, 1879, Dr. William Carson, president, in the chair, the discussion of Dr. Davis's paper on the "Antagonism of Opium and Belladonna" was continued.

Dr. Comegys had not seen many cases of opium poisoning; but in an extreme case which came under his observation, some years since, where the respirations were reduced to three and a half per minute, he employed hypodermic injections of atropia, one-thirtieth of a grain twice, with an interval of thirty minutes, and applied a powerful electro-current during the inspiratory movement, so as to stimulate it to the utmost. Some time after the second injection, on observing that the intensely contracted pupils were beginning to dilate, he felt able to announce that the patient would recover. So extreme was the narcosis that he does not think the electricity would have been equal to saving the patient.

A long time ago, before we had learned to employ remedies subcutaneously, he had occasion to treat a man who was thoroughly narcotized by opium. He gave, in that case, a large dose of tincture of belladonna in starch-water per rectum, and employed artificial respiration for nearly two hours. Here the safety of the patient seemed to have been secured by the latter procedure. That same man afterwards destroyed himself by drinking two ounces of laudanum. He was treated by two eclectic practitioners, by flagellation and forced locomotion, until he about dropped dead. He saw the sufferer, who was really his patient, but the gentlemen, though called in the emergency, refused to surrender the case. He told them how he had been saved before; but they preferred the method they had in hand.

Once, by the error of a druggist, a lady under his charge for a painful affection of the rectum, was pretty thoroughly poisoned by an overdose of belladonna administered in a suppository. He gave her thirty drops of laudanum in brandy, and some more after a short interval. It was with the utmost difficulty anything could be swallowed, owing to the dryness of the throat. The pupils were completely dilated, and there existed a remarkable muscular weakness;

respiration was feebly executed, but the slowness as in opium narcosis, did not exist. It was remarkable that the grave symptoms were produced by two grains of the extract of belladonna.

Opium in small quantities, say two to three drops of laudanum every three hours, stimulates the vassal nerves, and thus increases tonicity of the muscular coat of the extreme vessels; all of the functions of the body are energized, and most agreeable sensations are produced. This is the physiological fact. But by large quantities the opposite state is produced; that is, paralysis of the vasomotor, destruction of vascular tone, the special and general sensibility and tending to death by asthenia. In this state suitable doses, not too large, of atropia offer a strong hope of recovery. The paresis of the blood vessels may be overcome by atropia; but very large doses would only add to the atony already existing. The fact seems to be that both morphia and atropia, in small doses, increase the tonicity of the blood vessels; that in lethal state produced by either, the other in dose to produce physiological effect may be regarded as an antidote. In inflammatory processes, in which there always exists atony of the extreme vessels in the part affected and stasis more or less complete of the circulation, opium may be given (as in peritonitis) in enormous doses with success.

Dr. W. H. Taylor referred to a case, reported by himself to the Society December 22, 1874, of a child three and a half months old that had administered to it one-sixth of a grain of morphia. In a few minutes it began to show evidence of opium poisoning. It was then given three-eighths of a grain of sulphate of atropia. In a short time the full effect of the last-named medicine was established. At this juncture Dr. Taylor was called, and by diligent course of treatment the child recovered. He also referred to a case reported by Dr. Patton (formerly of this city), where rapid narcosis was produced by the hypodermic injection of one half grain of sulphate of morphia, promptly relieved by the injection of one-fifth of a grain of the sulphate of atropia.

Dr. Carson asked Dr. Davis what quantity of sulphate of atropia should be used in a case where respiration was two or three per minute?

Dr. Davis said authors did not agree as to dose; some recommending as small as $\frac{1}{120}$ of a grain, and others as large as one-third of a grain, to be repeated at intervals.

Dr. Carson said Dr. Patton's case had all evidence of full nar-

cosis, breathing two or three times in a minute. He had injected one-half grain of morphia: one-fifth of a grain of atropia was used with good result. If we accept this, what would be a dose?

Dr. Mackenzie had a patient that had taken, by mistake, two grains of atropia. He administered one-half grain of sulphate of morphia hypodermically, which produced no effect at all. He thought the report of the British Commission on the antagonism of opium and belladonna was not well founded. Their experiments were made on rabbits. The fact that these animals have a great tolerance for atropia, would render any evidence derived from that source as incompetent.

Dr. Davis said his paper set forth the physiological effects of opium and belladonna. What constitutes a dose in narcosis, we do not know. We should not overwhelm the patient—should sustain the heart and respiration. Dr. Davis read the following:

Dr. John Harley, in "Old Vegetable Neurotics," after an analysis of twenty-one cases of opium poisoning treated by belladonna, announces the following conclusions:

1. That the evidence of antagonism in any given case is inconclusive.

2. Taken individually or collectively, the cases show that belladonna has no influence whatever in accelerating the recovery from the poisonous effects of opium.

3. The somnolency, stupor, narcotism and coma—the essential effects of the action of opium—are intensified and prolonged by the concurrent action of belladonna.

4. That belladonna is powerless to obviate the chief danger in opium poisoning, namely, the depression of the respiratory function.

5. That the results of the combined action of opium and belladonna are the same, whether given in medicinal or toxical doses. While, therefore, belladonna can not in any sense be regarded as an antidote against opium, but in large doses the exact reverse, it may, under certain conditions mentioned below, and always in very small doses, be used in conjunction with other remedies as a means of aiding the recovery.

The "conditions" referred to are, to give $\frac{1}{8}$ of a grain of sulphate of atropia, at intervals of two hours, to stimulate the failing power of the heart.

Dr. Carson presented a patient suffering with paresis following diphtheria.

Dr. R. B. Davy exhibited a specimen to the Society, and read the following note: Was called a few days ago to see a woman who had been in labor about twelve hours. I was informed by the physician in charge that the membranes had been ruptured and the left shoulder was presenting. Had made several fruitless attempts to turn, and concluded to summon help. Placing the woman under chloroform, I turned and delivered without difficulty.

The child had been dead some time, but was not decomposed. Its encephalic structures were completely broken down, and the cranial bones gave no manner of support to the head. The latter, in fact, was completely without form, and resembled a rubber-bag filled with fluid. The epidermis had almost entirely peeled off, leaving the true skin of a light mahogany color. The cord was about the usual length, turned once around the child's neck, and tied in a knot about its center, tight enough to cut off all circulation. That part of the cord extending from the knot to the child was about the color of the latter's body. The part between the knot and placenta was perfectly black. About half an inch from the child's belly, the cord presented a narrowing the size of a crow's quill. The placenta was apparently unchanged. The woman claimed to have given birth one month before time.

The case is of interest from the fact that the death of the child was evidently caused by the knot found in the cord. The abnormal position of the child arose in all probability from the fact that the head did not present the necessary resistance to dilate the os, and this important part was accomplished by the point of the shoulder.

SESSION, February 18, 1879.

At the Society this evening, the following cases were given in some detail, where before they had been only alluded to, by Dr. Comegys, who procured written statements from Drs. C. O. Wright and Dunlap:

CINCINNATI, February 18, 1879.

DEAR DOCTOR: In reply to your communication, asking for the facts in my case of opium poisoning, and the antagonism of atropia, I herewith furnish you with it, as briefly as possible, presuming this will be all that you desire in this case.

The patient was an infant about ten weeks old, poorly nourished, much emaciated, and suffering with diarrhea. By mistake it took in

mixture about twenty drops of tincture of opium. I saw the case in a little less than a half hour after taking the medicine, and it was then showing the evidences of the opium. You would be surprised at the amount and the strength of emetics I gave it, without the slightest appreciable influence.

In a very short time after my arrival, it became *profoundly* narcotized, and upon examining the eye, it was almost impossible to say there was any evidence of its having had a pupil. It is not necessary to give you the opium symptoms, as they were too plain, and the knowledge of the medicine given was beyond doubt. It was not less than three-quarters of an hour after taking the medicine before I obtained my hypodermic syringe, and I at once injected into the arm a trifle less than a half grain of atropia; and although this was the remedy relied on, other measures were not neglected.

A half hour after the administration of the atropia, the pupil gave slight evidence of its influence, and in one hour it was very decided; from this time on it steadily improved, and I left the case after remaining with it six hours, with the knowledge it was saved, owing to the antagonism of atropia and opium. The child died about a month after this of inanition. Respectfully yours, C. O. WRIGHT.

Dr. W. T. Dunlap furnished the following statement of the treatment of three cases of atropinism:

CASE I A child aged two years and a half had by mistake (two drachms of a solution of atropia—two grains to one ounce) taken a half a grain of sulphate of atropia. When called in I found the child entirely unconscious, skin intensely red, pupils fully dilated. As it could swallow, I gave one drop of tincture of opium every fifteen minutes. At the end of two and a half hours, I administered hypodermically one-eighth of a grain of sulphate of morphia twice, half an hour apart. After that the pupils began to contract, and redness disappeared gradually. No other treatment was given.

CASE II. The mother, a few days afterward, for a suicidal purpose, took the residue of the solution of atropia—say one and a half grains. I was called four hours afterward. She was unconscious, but very restless, the skin very red, pupils fully dilated; could swallow. I gave at once fifteen drops of laudanum, and in half an hour fifteen drops. I then gave one-third of a grain of morphia hypodermically every three hours. The pupils began to contract after the morphia was given, and redness of the skin disappeared. She was up in twenty-four hours.

CASE III. The patient had taken a prescription, in which, by mistake doubtless, one-fourth of a grain of atropia was an ingredient. Two hours after administration I was called. I found the patient atropinized, pupils fully dilated, skin red, hot and smarting. Gave one

grain of opium every half hour until four grains were taken. Pupils soon contracted, and redness disappeared from the skin. She was able to be about next day.

Dr. Comegys read notes on the cases of opium poisoning which occurred in the experience of Drs. Dunlap and Wright, and afterward said: I can not agree with Dr. Davis that the antagonism between opium and belladonna is so slight; nor can I see why he criticizes the present methods of reporting cases of this kind so severely. Complaints were made at the last meeting that verbal reports were entirely unsatisfactory, and I went to the trouble to see the gentlemen personally and obtain from them the *minutiae* of the cases. I think it is but fair to say that the gentlemen referred to are reliable even in such delicate matters—as reliable probably as Drs. Wood, Harley, or J. Hughes Bennett, who have been referred to by the essayist. One of the cases occurred within the last four weeks, and not at all likely that it should be inaccurately reported, even if the affair was trusted to memory. With regard to other forms of treatment, as auxiliary to the subcutaneous injection of atropia, being used, I have to say that in Dr. Dunlap's case no other treatment was used, and in Dr. Wright's the child was simply slapped. But with the other treatment usually resorted to, such as slapping, pinching, use of electricity, etc., I can not see how the matter should be so mixed up as to prevent us from noticing the antagonistic effect of atropia.

Dr. Murphy said: It was not my good fortune to hear the reading of Dr. Davis's paper, which took place several meetings ago; but I understand from the discussion to-night that he denies the antagonism of opium and belladonna, or, at any rate, admits it only within a limited range, or so far as it will stimulate failing respiration or a failing heart. I am inclined to think that he relies too much on experimental observations on animals, and lays too little stress on clinical facts. While I have great respect for experimentation on animals, for the purpose of determining the physiological action of remedies, still I recognize the difference between the lower animals and man, and I think we should weigh these distinctions in organisms exceedingly well before we give our decision on this subject. Idiosyncrasies to one or another drug very materially interfere with us in drawing conclusions concerning their action. There is nothing which people fight over more—I mean fight in a Pickwickian sense—than the effects of medicines. I lately gave a man affected

with carbuncle one and a half grains of morphia without producing sleep. Suppose I should decide on the effects of morphia in carbuncle from this one case. My patients would be constantly subjected to the danger of being poisoned. Who, after all, knows anything about the action of medicines? Who can tell how quinia cures ague, or how almost any drug operates after it passes from our view behind the base of the tongue? I remember to have seen one of the cases of opium poisoning referred to to-night. Two students were compelled to hold him up for two hours, to even lift his legs in walking him around. Electricity was used, and he was slapped and pinched in addition to the hypodermic use of atropia; but it can not be said that these were more than auxiliaries to the atropia treatment. I do not wish to take issue with Dr. Davis, or to disparage observations for the purpose of determining the physiological action of medicines, but simply to emphasize the fact that clinical observations are of infinitely more value because they pertain to the human subject. For my own part, if I were to be so unfortunate as to be poisoned by either of these agents, I should direct my attendant to act upon the belief that they are really antagonistic. In cases of such poisoning which come under my hands, I use atropia and morphia, one for poisoning by the other, along with the other means usually applied. This I consider the proper treatment, and shall continue to employ it.

Dr. Illoway said: We have heard from Dr. Davis that opium was but slightly indicated in poisoning by belladonna, and as a proof of the same the treatment was so generally mixed up and confused by the employment of other means, that it was preposterous to attribute the result to the use of opium. In order to meet these statements, I will mention a case which occurred under the observation of Dr. Anderson, now deceased, a resident physician in the Cincinnati Hospital. A man swallowed the contents of a bottle containing eye-water, which was a strong solution of sulphate of atropia. In a short time the characteristic symptoms supervened, and among others the patient's skin was as red as a boiled lobster. Dr. Anderson gave half a grain of morphia hypodermically, and repeated it twice within an hour, and several times afterward. The patient recovered in twenty-four hours, and without other treatment.

Dr. Stanton said: From what I have heard to-night I am inclined to think there is a great deal of truth in the alleged antagonism of these two agents. Poisonous doses of atropia have been repeatedly

given in opium poisoning, without the slightest harm supervening. Let us suppose that there is no such thing as an antagonism between opium and belladonna, would not the doses of atropia invariably given produce poisonous symptoms? Experience shows that they are taken not only without their ordinary physiological effect, but with actual alleviation of the symptoms; and all who have administered large doses of atropia for opium poisoning have exhibited their faith in the procedure, as to do the same under other circumstances would be highly dangerous.

Dr. W. B. Davis said: Atropia in small doses is advantageous in opium poisoning so far as it stimulates the heart and lungs, and when pushed beyond this point it is deleterious. Dr. Stanton forgets the case of Dr. Taylor, where the child was poisoned by opium. The doctor gave a large dose of atropia, and substituted atropia for opium poisoning, which in turn required treatment. In Bartholow's Therapeutics you will find something touching this very point, and care is enjoined on the physician not to overstep the limit. Better repeat the small doses several times than venture too large a one.

In reply to Dr. Murphy, I will say that if more of such cases of poisoning have recovered without atropia than with it, he will readily appreciate the preponderance of evidence in favor of my assertions. We are informed that such is the case, and moreover the observations of Drs. Wood and John Harley show that the atropia treatment is unsatisfactory. I will here refer to the case seen by Drs. Mackenzie, Kearney and Taylor, where the symptoms of atropia poisoning seemed to be intensified by the injection of half a grain hypodermically. My paper is based on the latest observations made on animals, and only expresses the doubts of some of our best thinkers with regard to the alleged antagonism of opium and belladonna.

Dr. Carson read notes on a case of opium poisoning by two ounces of laudanum, Dr. Brown of this city having charge. He was found entirely narcotized. The general plan of treatment was hypodermic use of atropia in comparatively small doses (looking at the recommendations of Fothergill and others),—one-sixtieth of a grain in most of the ten or eleven that were used. The whole amount was not more than one-fourth of a grain. Other measures were used, such as electrical stimulation, coffee, and hypodermic injections of aqua ammoniæ. According to the plan projected by the author of the paper, the clinical position of the antagonizing influences of opium and atropia must be determined by the exclu-

sion of all other measures, or what complicating effects are introduced by such treatment as mentioned above, which renders valueless the inferences drawn as to atropia. The reasoning seems to be incorrect. When a man of experience treats such a case, he has it in his power, more or less, to assign to each remedy used the effect due to it. Our experience with the natural history of opium poisoning, and with the effect of coffee, electrical stimulus, external applications, etc., enables us to separate with reasonable certainty the several influences brought to bear. In this case there was apparent improvement in the general condition and special symptoms following many of the atropia injections. Such observations, made under the emergencies of practice, are what must settle this question, and not the experimental evidence so freely quoted.

Dr. Comegys reported the case of a man who died at the Cincinnati Hospital of aneurism of the aorta. He said this patient was under observation for three or four months. He suffered intense pain in the sternal region, extending up toward back of neck. I suspected aneurism from the extent of dullness. He had been in the house before, and was thought to have some consolidation of lung. The pulses on the two sides were alike. There was no change in the larynx or pupil of that side, showing that the recurrent laryngeal and cervical sympathetic were not interfered with.

Dr. Dandridge exhibited the aneurism, with heart and sternum, and said: This is mainly an aneurism of the ascending portion of the arch of the aorta, though the transverse portion is also very large. The descending portion is about natural. The arteries are atheromatous, and calcareous plates are to be seen on the internal surface of the enlarged vessel, though not in such abundance as is usual in such cases. This patient was syphilitic. There is universal pericarditis, and the lung is carnified, but the trachea is normal. As I hold the sternum in position, you see a decided prominence a little to the left of the median line, somewhat pyramidal in shape. This marked the site of the tumor in life. As I reverse the sternum and exhibit its posterior aspect, you see that nearly all the bone in this situation has been absorbed on account of pressure from behind; and the aneurism itself was so glued to the bone that pulling them asunder has left this large ragged opening in the anterior wall of the sac. As regards involvement of the larynx, it is said that the respiration had a kind of whistling character just before death.

Clinic of the Month.

ON THE TREATMENT OF LUPUS BY ERASION.—In an article on this subject in the *Lancet* of February 22 and March 1, 1879, R. Clement Lucas, F. R. C. S., Assistant Surgeon to Guy's Hospital, expresses some surprise that the treatment of lupus by erosion, which has become general throughout Germany, has received so little attention in England. The treatment advocated here is simple, for it requires only that the whole of the diseased tissue should be scraped away by means of a blunt spoon or scoop. To treat the disease effectually, care must be taken to thoroughly eradicate every particle of softened tissue, and there need be no fear of doing too much in this direction.

Those who have no experience in this method of treatment might imagine it possible with a blunt instrument to scrape away sound tissue with the diseased, but so dense is the normal derma that it offers a complete resistance to the scoop, however energetically applied. The operation is painful, and chloroform is necessary during its performance. Volkmann usually brushes the surface over with nitrate of silver after scraping, but the writer thinks this unnecessary. A history of the treatment of ten cases is given. In the first case, a woman twenty-eight years of age, there were five of these brown patches of lupus on her cheeks, varying in size from a sixpence to a shilling.

In order to compare the effects of different methods of treatment, it was determined to excise two patches, scrape two, and apply the galvanic cautery to the fifth. The two smallest were excised by elliptical incisions, and the edges of each wound were brought together by a single suture. She left the hospital a week after the operation, at which time the parts where excision had been practiced looked the most hopeful, as pri-

mary union had here taken place; the patches scraped presented a raw surface with a pale healing edge, and the spot cauterized was also granulating, but with an inflamed areola. A month after the operation the patches scraped had completely healed, the spot cauterized was still unhealed, and the granulations were exuberant, whilst the cicatrices of the two excised portions showed some evidence of the recurrence of the disease. A month later, it now being clear that the disease had returned in the cicatrices of the parts excised, chloroform was administered and these spots were scraped. After this I did not see her again, but I heard from time to time that there was no return of the disease.

The third case cited was that of a cachectic-looking boy, aged nine, who had a large ulcer extending from the temple to the margin of the jaw and from one ear across the nose. It was determined to compare the effects of different methods of treatment on different parts of this large ulcer. Accordingly, caustic potash was applied on one side, nitric acid at another part, and a third part was scraped. In a few days it was evident that the caustic potash had caused a considerable slough; the nitric acid had also burned somewhat deeply, and the healthy tissue near was much inflamed; whereas in the neighborhood of the portion scraped there was no evidence of inflammation, and it was the first to put up healthy granulations. Some months after, when the boy was again seen, considerable repair had taken place. On the inner side, where the caustic potash had been applied, there was now an indurated cicatrix; where nitric acid was applied the cicatricial tissue was less dense; and where the lupus was scraped there was a thin superficial scar. The greater part of the right cheek, however, was still covered with a sore, which was scraped with a spatula until a firm, dense tissue forming its base was reached. In a few days granulations sprang up all over the scraped surface, and with the aid of skin grafting it was soon completely healed. This boy had suffered from lupus during seven of the nine years of his life, and it is doubtful if any other means would have effected a cure, for he had tried a great many remedies.

HEART-CLOT IN PNEUMONIA.—In the New York Medical Journal, April, 1879, is a clinical lecture by Dr. Loomis on the above subject, from which we extract the last paragraph:

You hear from practitioners of medicine, and read in the books and journals, very much about giving carbonate of ammonia (and often in large doses) in pneumonia, with a view of preventing heart-clot. From what I have just said, however, you will readily see that this is all theory. You might as well (and better, I think) give carbonate of ammonia for the purpose of preventing the pneumonia itself as for prevention of heart-clot. If it does any good at all in pneumonia, it is because it acts as a stimulant, and in this way helps the heart perform its work. But as to its preventing heart-clot, I am certainly unwilling to subscribe to any such fanciful opinion. In the history of pneumonia there generally comes a time when we need a diffusible stimulant, and the only question in regard to the carbonate of ammonia is this, Is it the best stimulant at our command? For my own part, I do not believe that it is, and personally I very much prefer to rely upon champagne. When the time comes to give carbonate of ammonia, it is time to give champagne; and the latter, as I have just said, I believe to be much the better stimulant of the two. I trust, however, that no one will misunderstand these remarks in reference to heart-clot. I do not deny that clots do form in the heart in pneumonia, but I believe that this is only the case immediately before death, and that it is not due to any change in the blood itself. I hold, therefore, that it is useless to try to prevent such a thing by the administration of drugs, with the exception of such as act merely as stimulants, and thus increase the power of the heart.

COMBINED USE OF CUTTING AND SPLITTING IN A SEVERE FORM OF STRICTURE.—In the Lancet, March 22, C. F. Maun-der, Surgeon to the London Hospital, reports this case:

The patient, aged forty-two, had suffered from stricture for a period of fifteen years. During the first five years of this period the stricture had been split three times, and on each

occasion a relapse followed. During the last nine years voluntary micturition had been altogether in abeyance, and the bladder had to be periodically emptied with a small catheter. Occasionally retention supervened. When this gentleman consulted me, about a month or so ago, I found that the meatus would only admit a No. 9 catheter, and the urine contained a quantity of muco-pus. The first step in the treatment consisted in enlarging the meatus by incision. This I did on February 10th. A week later (the 17th) I divided the stricture anteriorly with Mr. Teevan's urethrotome, and followed it up immediately with Mr. Davy's modification of Holt's instrument, which admits of immediate dilatation up to No. 18. I then emptied the bladder with a full-sized instrument, and the operation was completed. A No. 9 silver catheter was used twice a day, either by myself or by the patient, for two or three days; then Nos. 10, 11, and 12 were gradually substituted to maintain the stricture well dilated. The patient had a tendency to rigors both before and after the operation, but quinia and opium given thrice daily soon checked this. The most gratifying feature in the case is that on the fourth day subsequent to operation the patient micturated voluntarily, an act which he had not performed for the last nine years. My own experience of rapid dilatation by Holt's method for the relief of intractable stricture has been highly satisfactory, the annual passage of a full-sized instrument having been in a very large majority of instances alone necessary. But splitting having failed thrice in this instance, I resolved to try internal incision, supplemented, if necessary, by thorough rapid dilatation. By these means I sought to determine the point at which the stricture should be divided, as well as to limit within safe bounds the extent to which it should be cut.

Notes and Queries.

AMERICAN MEDICAL ASSOCIATION.—The thirtieth annual session will be held in the city of Atlanta, Georgia, commencing on Tuesday, May 6, 1879, at 11 o'clock A. M.

SECTIONS.—“The Chairmen of the several sections shall prepare and read in the general sessions of the Association, papers on the advances and discoveries of the past year in the branches of science included in their respective Sections.”—By-Laws, Art. II., Sect. 4.

Practice of Medicine, Materia Medica, and Physiology.—Dr. Thomas F. Rochester, Buffalo, N. Y., Chairman; Dr. W. C. Glasgow, St. Louis, Mo., Secretary.

Committees appointed to report to this Section:

On Clinical and Meteorological Records.—Dr. N. S. Davis, Illinois, Chairman.

Effect of Climate in Colorado on Pulmonary Phthisis.—Dr. C. Denison, Colorado, Chairman.

Obstetrics and Diseases of Women and Children.—Dr. E. S. Lewis, New Orleans, La., Chairman.

Surgery and Anatomy.—Dr. Moses Gunn, Chicago, Ill., Chairman; Dr. J. R. Weist, Richmond, Ind., Secretary.

Medical Jurisprudence, Chemistry, and Psychology—Dr. L. M. Eastman, Baltimore, Md., Secretary.

State Medicine and Public Hygiene.—Dr. John S. Billings, Washington, D. C., Chairman; Dr. J. T. Reeve, Appleton, Wis., Secretary.

Ophthalmology, Otology, and Laryngology.—Dr. H. Knapp, New York, Chairman; Dr. X. C. Scott, Cleveland, O., Secretary.

The following Committees are expected to report:

On Prize Essays.—Dr. Robert Battey, Rome, Ga., Chairman.

On Necrology.—Dr. J. M. Toner, Washington, D. C., Chairman.

On Catalogue of National Library.—Dr. H. C. Wood, Philadelphia, Pa., Chairman.

On Recommendations in President Richardson's Address.—Dr. T. G. Richardson, New Orleans, La., Chairman.

On Ozone.—Dr. N. S. Davis, Chicago, Ill., Chairman.

On Sanitaria for Consumptives.—Dr. H. I. Bowditch, Boston, Mass., Chairman.

On Dr. Seguin's paper on the Intervention of Physicians in Education.—Dr. R. J. O'Sullivan, N. Y., Chairman.

Changes in Plan of Organization to be acted upon.

Offered by Dr. J. M. Keller, Arkansas. Plan of Organization, Art. IV., Sec. 1.

In future the Committee on Nominations shall present the name of no person for appointment or election to office or position save on the Committees on Necrology and Climatology, unless the party nominated be in attendance on the Association at the time.

Offered by Dr. H. O. Hitchcock, Michigan. Plan of Organization, Art. IV., Sec. 1.

The several State, Army, and Navy delegations, including delegates and permanent members, shall, on the first day of the Annual Meeting of this Association, at a meeting publicly called for that purpose, nominate candidates for the several offices of President, Vice-President, and Chairmen for the several Sections, and shall choose one of their number to act on the Nominating Committee of the Association, with power to cast as many votes in that Nominating Committee as there are members of the delegation of which he is a member. Candidates for the several offices above named to be reported to the Association shall be selected from the names reported to the Committee of the several State Delegations.

Offered by Dr. A. N. Bell, N. Y. By-Laws: II. Sections.

Consolidate Section 4, On Medical Jurisprudence and Psychology, and Section 5, On State Medicine and Public Hygiene, and call it Section 4.

Offered by Dr. J. J. Caldwell, Md. By-Laws: II. Sections.

Form an additional Section to be known as the Section on Neurology and Electrology.

Offered by Dr. T. Clay Maddux, Md. By-Laws: II. Sections.

Form an additional Section on Diseases of the Genito-Urinary Organs, including Syphilis and Dermatology.

Offered by N. S. Davis, as Chairman of a Committee. "Code of Ethics."

Art. I., paragraph I., add "And hence it is considered derogatory to the interests of the public and the honor of the profession, for any physician or teacher to aid, in any way, the medical teaching or graduation of persons knowing them to be supporters and intended practitioners of some irregular and exclusive system of medicine."

"It shall be the duty of every member of the Association who proposes to present a paper or report to any one of the Sections, to forward

either the paper, or a *title* indicative of its contents and its *length* to the Chairman of the Committee of Arrangements at least one month before the Annual Meeting at which the paper or report is to be read. It shall be the duty of the Chairman and Secretary of each Section to communicate the same information to the Chairman of the Committee of Arrangements concerning such papers and reports as may come into their possession or knowledge, for their respective Sections, the same length of time before the Annual Meeting. And the Committee of Arrangements shall determine the order of reading or presentation of all such papers, and announce the same in the form of a programme for the use of all members attending the Annual Meeting."

WILLIAM B. ATKINSON, M. D.,

Permanent Secretary.

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.—The following is a list of delegates from the Kentucky State Medical Society:

Dr. H. M. Skillman, Lexington; Dr. J. W. Thompson, Paducah; Dr. J. A. Hodge, Henderson; Dr. J. L. Dismukes, Mayfield; Dr. Turner Anderson, Louisville; Dr. Irvin Keller, Louisville; Dr. H. F. McNary, Princeton; Dr. R. C. Thomas, Bowling Green; Dr. Coleman Rogers, Louisville; Dr. Preston B. Scott, Louisville; Dr. Pinkney Thompson, Henderson; Dr. J. M. Meyer, Danville; Dr. Willoughby Walling, Louisville; Dr. M. F. Coombs, Louisville; Dr. J. Hale, Owensboro; Dr. Harvey McDowell, Cynthiana; Dr. R. W. Taylor, Hawsville; Dr. I. S. Warren, Danville; Dr. A. D. Price, Harrodsburg; Dr. C. W. Kelley, Dr. J. A. Ochterlony, Louisville; Dr. S. S. Watkins, Owensboro; Dr. J. D. Neet, Versailles; Dr. H. Brown, Hustonville; Dr. J. D. Collins, Henderson; Dr. J. W. Pritchett, Madisonville; Dr. I. B. Walker, Scottsville; Dr. S. J. Rhodes, South Carrollton; Dr. J. T. Wise, Covington; Dr. J. Baker, Shelbyville; Dr. R. W. Gaines, Hopkinsville; Dr. E. S. Gaillard, Louisville; Dr. D. S. Reynolds, Louisville; Dr. L. S. McMurtry, Danville; Dr. S. R. Craig, Stanford; Dr. R. O. Cowling, Louisville; Dr. John Goodman, Louisville; Dr. D. D. Carter, Versailles; Dr. M. E. Paynter, Midway; Dr. L. P. Yandell, Louisville; Dr. J. M. Holloway, Louisville; Dr. L. B. Todd, Lexington; Dr. W. B. Rodman, Frankfort; Dr. W. E. Ryan, Simpsonville; Dr. J. W. Singleton, Paducah; Dr. W. B. Miller, Calhoun; Dr. J. A. Larrabee, Louisville; Dr. E. R. Palmer, Louisville; Dr. A. R. Vance, Louisville; Dr. P. D. Todd, Eminence; Dr. J. P. Thomas, Pembroke; Dr. D. C. Tucker, Danville; Dr. J. H. Lewis, Georgetown; Dr. C. H. Thomas, Covington; Dr. J. Q. A. Stewart, Frankfort.

OBITUARY.—Willis E. Sutton, M. D., died at the house of his father, Dr. George Sutton, in Aurora, Ind., Feb. 24, 1879. The disease which caused his death, and against which he had struggled for two years, was phthisis pulmonalis. Dr. Sutton received his literary education at Moore's Hill College and Wabash College. He graduated at the Medical College of Ohio in 1872, and the following winter attended Jefferson Medical College. He was a good microscopist, and was the first to detect trichinæ in the pork in South-Eastern Indiana. He was a member of the Indiana State Medical Society, and of the American Medical Association. Dr. Sutton was only thirty years old at the time of his death. He was of a kindly and genial nature, an enthusiastic lover of his profession, and had he lived would have stood in the foremost rank of his medical brethren in Indiana.

Thomas Waddel, M. D., one of the most prominent physicians of Toledo, Ohio, and one of the most promising physicians in the west, died at Toledo, March 9th. He was sick only a few days, and died from congestion due to malaria, aggravated probably by heart complications hitherto unknown. He was one of the editors of the Toledo Medical and Surgical Journal, lecturer on Gynecology in the Toledo School of Medicine, a member of several prominent societies of his own state and of the American Medical Association.

Dr. H. M. Minesinger, Sulphur Springs, Ind., died March 31, 1879. He was a member of the Henry County Medical Society, and a worthy practitioner.

TO ATLANTA FROM LOUISVILLE.—A round trip rate of twenty-three dollars and eighty-five cents, between Louisville and Atlanta, has been agreed upon by the lines interested, in favor of delegates to the meeting of the American Medical Association, to be held at Atlanta, commencing May 6, 1879, and in favor of delegates to the Southern Baptist Convention, to be held at the same place, commencing May 8th, 1879. Tickets will be on sale in Louisville, from May 1st to 6th inclusive, and will be good returning until May 20th inclusive.

PRIORITY IN CHOLECYSTOTOMY.—In a note received from Dr. G. W. H. Kemper, of Muncie, Ind., the priority of this operation is considered as follows:

Dr. W. W. Keen, Philadelphia, reports a case of cholecystotomy, in the *American Journal of the Medical Sciences*, January, 1879, and on page 139 remarks:—"Originally proposed by Petit and later by Maunder and Hughlings Jackson, so far as I know this is only the second case in which cholecystotomy has been done. The first will be found in the *British Medical Journal*, June 8, 1878, p. 811." [Sims's case.] It seems not to be known, or else forgotten, that the late Prof. J. S. Bobbs, of Indianapolis, reported a case which was published in the *Transactions of the Indiana State Medical Society* for 1868, p. 68, entitled "Lithotomy of the Gall-Bladder." Although Dr. Bobbs was in doubt as to the true nature of the case when he commenced the operation, nevertheless the abdomen was opened, the gall-bladder exposed, incised, and the contents (fluid and calculi) removed. This is, if not the first, at least the first successful case on record. The case is unique, and just at the present time, when the operation of "cholecystotomy" is likely to attract the attention of the profession, ought not to be overlooked. I speak to the praise of his memory.

RESIGNATION OF THE PRESIDENT OF THE INDIANA STATE MEDICAL SOCIETY.—Dr. L. Humphreys has tendered, through Dr. Woolen, the secretary of the society, his resignation as president of the Indiana State Medical Society. He does this with extreme regret on account of continued ill health, but resigns at this time that Dr. Newland, the vice-president, may be informed of his action, and be prepared to assume the duties and responsibilities of the presidency.

TO ATLANTA FROM INDIANAPOLIS.—The fare for the round trip, from Indianapolis to Atlanta and return, will be thirty dollars and thirty-five cents. Physicians, whether delegates or not, and their families, can procure excursion tickets: these tickets will be good from the first to the sixth of May, going, and to the twentieth returning.

APOLLINARIS WATER.—The doubt which some rival dealers attempted to cast on the genuineness of this delightful beverage has, we are glad to learn, been effectually disposed of. The analysis of the water, as conducted by the very first chemists both in England and Germany, and more recently in America, has put the question at rest. The Apollinaris water of commerce is really, as it claims to be, a natural mineral water, delivered to consumers sound and sparkling with the gas of the Brunnen. No greater addition, in the way of a drink, has been made to the comfort of the dyspeptic than this water. As a table beverage it is unsurpassed. To the sufferer from weak stomach and slow digestion it is a blessing. A frequent use of it since it was first introduced into this country, and a bottle or more of it daily last year while in London, leads the writer of this to indorse all that was said of it by Dr. Brunton when it was first used in England. And Apollinaris water is even more than a mere beverage. Of all effervescing drinks, it is the most serviceable in acidity of the stomach, and in the nausea which sometimes follows the use of opium.

TREATMENT OF ASTHMA.—The following comes from Dr. H. M. Smith, of Bloomville, N. Y.:

℞ Lobeliæ fol. pulv.,	. . . . .	3 ij
Stramonii fol. pulv.,	. . . . .	3 ij
Belladonnæ fol. pulv.,	. . . . .	3 ij
Pot. nitrat. pulv.,	. . . . .	3. iij.

Mix and keep tightly corked.

I order the patient to shut himself in a small, warm, close room, and sprinkle the medicine upon live coals, or smoke it in a fresh clay pipe, till relief is obtained, which is usually within ten or fifteen minutes.

THE INDIANA STATE MEDICAL SOCIETY.—This society meets at Indianapolis the third Tuesday in May. A large attendance and an unusual number of good papers are promised.

THE AMERICAN PRACTITIONER.

MAY, 1879.

Certainly it is excellent discipline for an author to feel that he must say all that he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

Original Communications.

ON GRAVES'S DISEASE OR CARDIAC EXOPHTHALMIC GOITRE.

BY J. E. LOCKRIDGE, M. D.

In the few remarks I am about to make in reference to this curious and intensely interesting disease, I can not hope to interest or instruct the careful and experienced investigator; but I do hope to be able to at least arrest the attention of the young and unwary practitioner; and I allude to the latter class in no sense of animadversion, for I utterly failed to diagnose the first case of Graves's disease I encountered about twenty years ago. But about this I will have more to say further on in this paper.

I think the disease is by no means of very rare occurrence; indeed I am of the opinion that it is very often overlooked entirely. I am strengthened in this opinion from the fact that I have taken the pains, during the past six months, to question about half a dozen quite busy and well qualified physicians—all of them from seven to fourteen years' experience—as to their experience in Graves's disease. Not one of them had met with a single case to his knowledge.

I feel quite sure that one can scarcely practice medicine for seven years without meeting with a case of this disease, whether he is aware of it or not. I have met with three cases in twenty-two years—one for each septennial period. Prof. Flint, sr., had seen five or six cases up to 1865, which shows about the same ratio for him. Chisholm, Forsyth Meigs and Octerlony, have each met with from three to five cases, which shows about the same ratio.

Whilst I can not do more than strengthen the convictions to some extent of those who have ably attempted to investigate this most curious disease, yet I think that all who have had an opportunity of witnessing even a single case ought to give the profession the benefit of their experience. Although I have had some experience in the management of it, and have read and thought much about it, yet I am sorry to be compelled to admit that I have nothing new to offer as to the arcana of the disease; that is, more especially the causation and exact pathology. As to the nomenclature of the disease, I might just as well state here that the Germans claim that one of their number, Dr. Basedow, investigated and established it as a separate and distinct disease in 1835, and hence they and some others call it Basedow's disease or exophthalmic goitre. The English claim that Dr. Graves, of London, was really the first to fully establish it as a separate disease in 1840; and, whether right or wrong, I believe it is now generally called Graves's disease.

In the very outstart of my description of some of the leading symptoms of this disease—for I shall confine myself to the more prominent symptoms alone, and leave my readers to note for themselves the innumerable sympathies and manifestations likely to arise in different cases—I wish to call attention to three cardinal symptoms, namely, a condition of extreme irritability of the heart, an exophthalmos or great prominence of the eyeball, and an enlargement of the thyroid gland, or so-called goitre. I can conceive of no genuine case of Graves's disease without the presence of all three of these symptoms at some stage of the case, either altogether, or

variously combined, or associated. Indeed, I feel so sure of this that I have taken the liberty in my caption to denominate the disease "Cardiac Exophthalmic Goitre." I am aware, however, that most authorities on the subject contend that in some cases there is an absence throughout of some one of these symptoms; that the prominent eyeball and goitre may exist without the cardiac symptom; and that you may have the cardiac irritability and exophthalmos without the goitre, and so on. There is another prominent symptom that I have noted in all of my cases not mentioned at all by authors, and that is an exaltation, without any perversion, of the mental and moral faculties. As to the chronological accession of these cardinal symptoms, I will just say that it is not regular in the experience of observers; but from my experience, I would say that the cardiac tumult and general nervous excitability appear first, then the ocular deformity, and lastly the glandular enlargement, but the last two may change priority, or occur contemporaneously; but I have invariably noticed that on the occurrence of one or both of the latter, the former is usually very much mitigated, except there be organic change.

The action of the heart is rapid and forcible, with tumultuous palpitation from the least excitement, with violent pulsation of the carotid arteries; the impulse of the heart against the thoracic parietes is also usually well marked. There is no cardiac murmur, except in long-standing cases involving hypertrophy or other organic changes, or in extreme cases of anemia with the hygremic murmur. This cardiac excitability is usually, if not invariably, accompanied with an extreme general nervous irritability, the nerves seeming to be on the *qui vive*—the patient, for the most trivial cause, letting fall whatever she may chance to hold in her hand, whether it be an armful of costly dishes or her infant. This constant overaction of the heart seems at times to superinduce an attack of fainting which may render the patient unable to maintain the erect position for a time, much less progression.

In a variable length of time from the onset of the cardiac

symptoms, sometimes a year or more, or less, the patient begins to complain of dimness of vision, when, on examination, it is found that the eyeballs project apparently too far from their sockets, so far, indeed, in most cases, that the lids can no longer cover them properly, and in consequence of the want of protection, or the proper adaptability of the lids to the globes, the eyes become weak and inflamed, and the pupils dilated. This condition of the eyes may come on rather suddenly, and on some days it is worse than on others; and after death, in most cases, the eyes assume their natural position; in others they continue to protrude, but in these latter there is found to be hypertrophy of the connective tissue of the orbit. In addition to the protrusion of the globes, there is a peculiar wild stare, which renders the patient by no means prepossessing in appearance.

About this time, perhaps before, but more often afterward, I think, the patient will say to you that she is afraid that she is getting the "big neck," and on inspection you will find that there is an enlargement of the thyroid gland, it may be on either side, or perhaps both, with the isthmus as well; but this so-called goitre scarcely ever assumes the enormous proportions of the ordinary goitre; nor is the goitre usually commensurate with the exophthalmia. Now, these are the most prominent symptoms met with in a typical case of Graves's disease, and from which the disease should certainly be recognized.

There are only a few more symptoms that I wish briefly to allude to; and first, as I have observed, there seems to be an exaltation of the mental and moral faculties. The patient seems prone to loquacity; she is vivacious, and more or less speculative; she seems disposed to underrate the import of her malady, and often appears cheerful, when to others her condition and appearance indicate disaster in the near future. There are often attacks of something like colic; also various dyspeptic symptoms, and more or less irregularity of the appetite, and other direct or sympathetic troubles that will be better understood when we come to consider the pathology of the disease.

Unfortunately the pathology of this disease is not so well ascertained as rational and practical medicine would demand. Yet it is generally agreed among observers and investigators that the source of all the trouble is in the cervical portions of the sympathetic nerves—some change, often occult as to post mortem inspection, in the ganglia or their connecting cords or outgoing fibers, by which the cardiac and cervical branches are paralyzed and lose their inhibitive power over the arteries and heart, thereby causing an undue action and irritability of the latter, with an undue dilatation of the former; and this diastolic latitude of the arteries of the orbit and neck in turn gives rise to the exophthalmos and bronchocele. It is a fact, as well established as any other in the nervous system, that one of the functions of the sympathetic nerves is vaso-motor, and that division or jugulation of one of the cervical sympathetic nerves in the neck produces dilatation of the arteries on that side of the neck and head; and that irritation as with galvanism, in the same situation, produces contraction of the arteries on the corresponding side. It is also well ascertained that the action of the sympathetic system is wholly from below upward; and this fact alone would be almost sufficient to prove that the change, whatever may be the nature of it, in Graves's disease, must be located in the cervical region. The cardiac branches are the lowest sent off from the cervical ganglia, and the heart is the organ lowest down directly implicated in this disease. The symptoms of indigestion, cramp of the stomach, and the like, are not constant symptoms, and scarcely exist at all in many cases of this disease, and are purely reflex, produced by the fibers of communication between the sympathetic and *par vagum*.

The true *nature* of the disease has not been made manifest by any constant organic changes observed by post mortem examination. It is true that in a few fatal cases of Graves's disease there has been found hypertrophy of the cervical ganglia and their connecting cords, and in others atrophy of the same; but in most of the cases no appreciable alteration in structure was discovered, either gross or microscopic. It is

likely that a state of affairs exists in the sympathetic akin to neuralgia in other nerves,—the *neuron* without the *algos*,—since there is no sensation, except reflex, in the sympathetic nerve. And we can have the most excruciating pain from neuralgia in sensitive nerves without any appreciable alteration in structure, except there be accompanying neuritis. I am almost forced to the conclusion that the jugulation of the cervical sympathetic and the resultant paralysis of the ganglia and cords, which gives rise to the manifestations of this disease, must have some *causam causarum* of this occult sort.

Some observers think that the condition of the uterus and its functions have much to do with the *fons et origo* of the disease; but from my own observation I have been unable to see any connection whatever in this direction. Forsyth Meigs is forced to the conclusion that the psychological condition has much to do with the origin of the disease in many cases. And he is very much strengthened in this belief from a perusal of Claude Bernard's *Leçons sur les Propriétés des Tissus Vivants*, in which he advances the curious theory that poets and fiction writers are not far wide of the truth, in locating in the heart the seat of the noblest and purest sentiments of the soul; but granting, of course, the established fact that the heart is also the center and source of the circulation of the blood. Bernard intimates that the heart acts by a power of its own, and is only connected with the brain by the pneumogastrics, for purposes of coördination with that nerve center. In proof somewhat of this allegation he cites the phenomenon that when a woman hears some tender words of love, the heart palpitates and the flush comes to her cheek before either reason or reflection has time to be exercised. He further concludes that the expressions, "he loves with all his heart," and "the heart is broken with grief," and the like, are not mere poetic fancies but physiological realities. This is manifestly a physiological fancy; for I can conceive of no other way for one to become cognizant of outside impressions, whether imparted by a gentle pressure of the hand or soft words whispered in the ear, than through one or more of the

special senses, and from the brain to be duplicated to the different parts or organs. This sudden flushing of the cheek and palpitation or irregularity of the heart is reflex or involuntary, it is true, and therefore quicker than through the ordinary operation of the mind,—just like one asleep and dreaming for a few seconds, the mind wanders over such a latitude of fancies, that he can scarcely be made believe but that he has been asleep many minutes.

I am not prepared to admit that the psychological condition of the patient had much to do with the origin of the disease in the three cases that have fallen under my observation. Two of these cases were certainly absolutely free from any mental, moral or nervous eccentricities; and the third, though a lady of considerable vivacity, industry and energy, and who has done a good deal of literary work in her time, yet is wholly free from any peculiarity aside from that usually involved in the course of this disease; and no one could be more blessed with a happy household and surroundings, free from everything calculated to cross or harass her in any way whatever.

The protrusion or displacement of the eyeballs seems to be the result of the undue dilatation of the underlying arteries of the orbit, for after death the globes recede to their natural position, except in certain cases in which there has been found hypertrophy of the orbital connective tissue, which serves as a barrier to their return. The dimness of vision is doubtless caused by a tension of the optic nerves and dilatation of the pupils; and the latter is produced by the influence of the sympathetic in its connection through the lenticular ganglion with the third pair, which latter determine the dilatation of the pupils. The bronchocele is also produced by the dilatation and engorgement of its underlying arteries. There has been found no exaggeration of the normal parenchyma of the thyroid, or heterologous formation, or cystic development, as is usually observed in cases of true goitre; but in some long-standing cases of Graves's disease there is some hypertrophy of the connective tissue of the thyroid body. Another proof

of the vascular theory, is the fact that both the bronchocele and exophthalmos are much more marked on some days or periods than at others.

From my experience in the disease, I can not agree fully with those who maintain that anemia is at the foundation of most cases. Not one of my cases was at all anemic in the start, nor did they become so to any great extent, and certainly not until they were pretty well shattered in constitution by the constant nervous agitation. It is true that the patient presents a certain cachectic appearance, more like the bilious or malarial aspect than anything I can compare it to.

I hope the diagnosis will be very easy from what I have said in the preceding pages. Just bear in mind the three cardinal symptoms—the excessive and continuous cardiac excitement, the exophthalmos, and the bronchocele; and add to these, at your leisure, the general nervous excitability, the dyspeptic symptoms, and the exaltation of the moral and mental faculties. I believe that in any genuine case of Graves's disease, the three principal symptoms are sure to come sooner or later, if the case be let alone; or treated improperly, it may be six months or a year, or even more; but they will make their appearance, those authorities to the contrary notwithstanding, who maintain that one or two of these symptoms may constitute a case of the disease. There are cases of extreme anemia in which the eyeballs are somewhat prominent and the thyroid body is slightly enlarged, but this is produced by weakness of the recti muscles and a deposit of adipose tissue at the bottom of the orbits, and a general laxity of tissue. Nor does every case of enormous goitre, with palpitation of the heart at times, in which hysterical symptoms are present, constitute one of Graves's disease.

As to the prognosis of the disease some writer has said that Graves's disease "neither kills nor gets well;" that is, that although the most prominent symptom may subside and leave the patient in comfort, yet the deformity of the eyes and thyroid may remain through life. The latter was true of one of my cases, who, fifteen years afterward, was comparatively

well, but the deformity remained to a considerable extent. Another died, the principal cause being apparently eccentric hypertrophy of the heart. The third seems now to have entirely recovered. I believe the disease to be one of long duration, but many cases of entire recovery have been reported. When death is the result, I believe it to be more often the result of organic changes in the heart. However, the patient may be literally worn out by the excessive nervous irritability. In those cases of long standing, in which the eyes and thyroid fail to return to their natural position, in addition to the barrier of hypertrophied connective tissue, other causes must be obvious to any one.

As to the treatment of the disease, inasmuch as I intend to subjoin a succinct history of my three cases, together with the exact mode of treatment I pursued, in one of them at least, but failed to use in one other, I will in this place merely record the mode of treatment now well agreed upon by all observers. The remedies which have been found most useful by all, are iron, digitalis and belladonna, variously combined, and in the usual doses; and to these may be added nux vomica and ergot. I prefer Vallet's mass or the pyrophosphate of iron; but Quevennes's, or dialysed, will answer the purpose. Most practitioners prefer the digitaline, but I have used the pulverized digitalis. The preparations of iodine, either locally or constitutionally, do no good in these cases; but, on the contrary, have been found to be positively hurtful. Every precaution should be taken to remove all sources of excitement, and all surroundings calculated to increase the cardiac excitement, or nervous irritability, must be carefully attended to. In extreme cases it has been found necessary to confine the patient to her bed for four, or even six months at a time.* If the menses be irregular, or at fault in any way, they must of course be corrected. The intercurrent dyspeptic symptoms.

* It will be seen that I have used the feminine gender throughout my paper; for whilst the disease may and has occurred in the opposite sex, yet such an occurrence must be rare, and my cases have all three been in females; hence I have inadvertently used this gender.

must be combated, and the colic, which often supervenes, is best treated by paregoric and purgatives. Nervines and anti-spasmodics will often control the extreme nervous irritability.

CASE I. In 1858 Mrs. R. came under my observation. She was then suffering from palpitation and great overaction of her heart, with much general nervous disturbance. She was a widow lady, about twenty-eight or thirty years of age, and the mother of two remarkably healthy children, aged respectively two and four years. Before this trouble began she enjoyed perfect health, and was noted in the neighborhood for beauty, being tall, with black hair and eyes, and rosy cheeks. She was very poor, but yet she was usually very cheerful, and there was nothing in her surroundings that seemed to especially cross or annoy her. So great was her cardiac turmoil at times, that on one occasion I found her lying by the roadside half a mile from her home, unable to proceed any further toward a neighbor's house, whither she was attempting to walk.

For an hour or more she was not only unable to progress, but even to assume the upright position, so great was the palpitation and general nervous disturbance. At no time during my attendance on her was I able to detect any murmur, or rhythmic disturbance, or organic change of any kind whatever in her heart. Some months after the accession of the cardiac symptoms—I have to rely in part on the coteremporaneous notes of another case under my care in the same family—her eyes began to assume a strange, prominent appearance; she became glaringly exophthalmic, and in a very short time a bronchocele began to develop. After a full development of the exophthalmia and the bronchocele, the cardiac symptoms and the nervous irritability mitigated. This has been the case in two of my patients, and I believe it to be the rule in most cases, unless some organic change has occurred in the heart in the meantime—the goitre and exophthalmia seeming to act the part of a safety-valve to the circulation as it were. I had now a typical case of Graves's disease to deal with—the cardiac symptoms and general nervous excitability, the exophthalmos with the peculiar stare or glare of the eyes, and a large bronchocele. I shall never forget the wretched appearance of this case. In the meantime she had lost most of her teeth, and of course much of the tint and bloom of health, which, together with the other alterations, had changed her from a comparatively

beautiful woman into one as uncomely as possible, and this was especially so when she undertook to smile or laugh.

I had no knowledge then of Graves's disease; it had only been established as a separate disease a few years before. My text-books—Watson, Wood, Barlow and the like—made no mention of it then; nor did my professor on the practice of medicine say a word about it, to my recollection. Of course, the treatment was empirical and unsuccessful. I referred the cardiac and nervous symptoms to the use of snuff, for she was an inveterate “snuff-dipper,” and prescribed anti-spasmodics and nervines, which gave but little, even temporary relief. I regarded the bronchocele as an ordinary case of goitre, for goitre was endemic in that region. In an experience of twenty years there I was never without half a dozen cases of goitre on hand; hence, I treated that with the local application of iodine, which did no good at all.

The symptoms gradually subsided, and her general health somewhat improved, leaving a good deal of deformity, however, and in twelve years she married again and left the neighborhood, and passed from under my observation. She was still living eighteen years after the onset of the attack, but I knew nothing of her condition at that time. In this case, unfortunately, not one of the remedies which have been found so satisfactory and effective in the treatment of Graves's disease was employed at any time.

CASE II. In the autumn of 1873, I was called in to see Mrs. B., the wife of a medical man; or, at least, one who attempted to both practice medicine and preach the gospel, or heal the sick and cast out devils. I recognized at once a typical and most distressing case of cardiac exophthalmic goitre. She had long since passed the menopause, being about sixty-three years of age; very heavily built, weighing, when in health, one hundred and seventy-five or one hundred and eighty pounds. She was a coarse, industrious woman, of moderate intelligence, and had been remarkably strong and healthy, until within the last year or more, when the troubles came on. I could learn but little of the priority of the accession of her symptoms, further than that she first began to complain of palpitation and much “fluttering” of the heart, and great nervousness. Soon after, however, it was observed that her eyes presented a very strange prominence and stare, and about the same time quite a large bronchocele was developed. When I saw the patient her condition was

wretched in the extreme; she could get no relief lying or standing, on account of the cardiac trouble and shortness of breath, except under the habitual use of large doses of opium, which was the only medicine she was taking. The eyeballs were quite prominent, and presented that never-to-be-forgotten stare or glare; her pulse was frequent and feeble, and she often had fainting spells, and much difficulty in breathing at times, which had been attributed to "phthisic" or asthma; her feet and legs were very edematous. On auscultation and percussion, I found a very marked mitral regurgitant murmur, and enormous hypertrophy of the whole heart apparently, and evidently at the expense of the parietes, or eccentric hypertrophy or dilatation.

From the very great damage already done to the heart, and the general unpromising condition of the patient, I gave the unreserved opinion that death would come to her relief in a few months.

I did not interdict the habitual use of the opium, but recommended bromide of potassium to be given in conjunction with it, and also advised the exhibition of iron, nux vomica, and digitalis, in the hope that they might, in some measure, mitigate the symptoms. I saw this case no more, but she died about seven months after my first and only visit.

CASE III. October, 1877, I saw Mrs. W. casually, for the first time. I rode with her in a hack to and from a funeral. She was complaining very much of cardiac trouble, palpitation, extreme excitement of the heart and various accompanying head symptoms, together with general nervous excitement, which had existed for several months. I made no examination of her case, and of course had no knowledge of its true nature. She took my card, and said that she would call at my office and consult me in a few days.

Having a large household, and a multiplicity of affairs to look after, she bore up under her afflictions, and postponed her visit to my office, or that of any other physician, until August, 1878, when, for the first time, she came to my house, and found me sick in bed and unable to make the proper examination of her case. By this time, however, new and far worse troubles had come upon her. In addition to the cardiac and nervous excitement, which were even worse than before, her eyes, for some weeks, had been very much at fault; and she complained of dim and perverted vision, for the palliation of which she was wearing smoked glasses, under the

advice of some itinerant oculist. She was now greatly exophthalmic, with slight convergent strabismus of both eyes.

The globes protruded so far that the lids scarcely covered them, and this retraction and imperfect adaptation of the lids to the balls gave rise to a constant exposure and irritation of the conjunctiva, with a resultant soreness and lachrymation. It was difficult to realize that this was the same lady I met with eight months before; so changed was her whole aspect by the great prominence and convergence of the eyes, and the frightful stare. There was now some sallowness of the skin; appetite and digestion very variable; pulse one hundred and twenty, and quick. She had lost some in weight, but was by no means anemic, and the uterine functions were apparently healthy. I should have said, probably before now, that the lady was about thirty-three years of age, married, and the mother of three or four children, of rather under medium height, and would weigh one hundred and fifteen or one hundred and twenty pounds; she was very intelligent and vivacious; and all of her surroundings were as pleasant and happy as possible. No further examination of the case was made at this time, and no prescription was made; but I told her that the case was one of great interest, and was not likely to get well of itself, and I urged her to return in a few days, or have it attended to by some other physician at once.

She did not present herself again until the 23d of October, which was just one year from the time that I first casually met her in the carriage. She now presented a typical case of Graves's disease; the thyroid was much enlarged, and was causing her considerable difficulty from pressure, in deglutition and respiration, especially the former. Before the accession of the bronchocele, the cardiac affection and nervous irritability had been excessive; so much so that on several occasions, on the slightest surprise, she had let fall handfuls of valuable dishes and such things; but they were now somewhat mitigated; the eyes presented about the same appearance as when last seen; she has had no fever at any time; pulse one hundred and twenty, and quick, with considerable impulse against the thoracic parietes; there is no murmur, or alteration in size, or fault of rhythm. She had been suffering for several days from symptoms of indigestion and colic, which had, in part, determined her present visit.

Besides recommending a cathartic and some paregoric for the colic, I made the following general prescription:

℞ Pil. ferratæ Valleti, 3 i
 Pulv. digitalis, grs. xv
 Ext. nucis vomicæ, grs. xv
 Ergotine, grs. xv
 Ext. belladonnæ, grs. v
 Aquæ q. s. M. ft. pills No. xxx.

Sig., take one pill three times a day after each meal.

January 24, 1879, I visited the patient at her home. She has been on a protracted visit to a neighboring state, having been sometimes better, and again worse; but she carried out the treatment faithfully during her absence. I find her color and general health vastly improved; appetite and digestion very good; pulse eighty, and less excitable; considerable overaction of the heart, with impulse; no cardiac murmur, or other sign of organic change; very decided exophthalmia yet, and the eyes were quite weak and sore, and vision considerably perverted at times; thyroid body still enlarged, especially the right lobe, but less interference with deglutition and respiration complained of; uterus, kidneys, spleen, and other organs apparently healthy.

I found that she had once been poisoned with belladonna, and the comparatively small doses prescribed in the pills seemed to produce some dryness of the throat and preternatural dilatation of the pupils; hence, I thought best to omit it entirely in the prescription for a while, at least, and made the following prescription:

℞ Ferri pyrophosphat. 3 i
 Quiniæ sulph., grs. xv
 Pulv. digitalis, grs. xv
 Ext. nucis vomicæ, grs. xv
 Ergotine, grs. xv
 Aquæ q. s. M. ft. pills No. xxx.

Sig., take one pill three times a day after each meal.

February 11, pulse, sixty-four, and quite strong and regular; heart beats regularly, with no appreciable impulse; eyes vastly improved, especially the right one, which appears almost natural as to both position and axis; the left one is yet perceptibly prominent, and the lid is not perfectly adapted to the globe; the stare is quite apparent to me, although she regards her eyes as being about natural, and her friends flatter her that they are now perfectly straight.

The diplopia, dimness, and other defects of vision are no longer complained of, and she has dispensed with the smoked glasses worn for many months; the carotids are more quiet now than at any time since I first saw her. The enlargement of the right lobe of the thyroid has entirely disappeared, but the left lobe, corresponding to the eye affected, is quite perceptibly enlarged. Her appetite and general health are now first-rate, and her color and expression of countenance are wonderfully changed for the better. Continue treatment of my last visit.

March 8, 1879, patient called at my office to inform me that she is now in perfect health, and wished to know whether or not she must continue the pills, several boxes of which she had taken since my last visit. On careful examination I can find no signs of disease anywhere. Her heart seems to be perfectly natural; her eyes straight, and without any unnatural stare; her neck is unaffected by bronchocele or pulsating carotids; her nerves are as steady and unexcitable as they ever were in her life. In short, she presented about as good a specimen of perfect health as one is accustomed to see anywhere. All treatment was discontinued, and at this writing (April 12), there has been no return of the symptoms.

INDIANAPOLIS.

CASES OF FRACTURE OF THE SKULL WITH ANOMALOUS SYMPTOMS.

BY N. P. DANDRIDGE, M. D.

Pathologist to the Cincinnati Hospital.

J. A., a railroad engineer, while running his engine, was struck on the head by a stone thrown from the embankment of a cut through which his train was passing. His felt hat was cut, and a wound was made through the scalp about three inches above the root of the nose, and slightly to the left of the median line. He continued on the train until it reached Lexington, a distance of several hours, remaining during the entire day perfectly rational, and the next morning was able to dress himself without assistance. The accident occurred

December 14th, in the morning. December 15th he returned to Covington on the cars, a trip requiring some four hours, and reached home about the middle of the day. He now began showing signs of stupor, and when first seen at three o'clock P. M. he was unconscious, and could not be aroused even by the most persistent efforts. He was very restless, tossing from side to side, and constantly putting his hand to his head. No symptoms of paralysis could be discovered; his pulse was sixty, his respirations quickened, and his temperature 101° . Both his pupils were normal, and responded to light. The upper lids of both eyes were discolored from ecchymosed blood; there was no subconjunctival ecchymosis. On the forehead a cut, two inches long and extending down to the bone, was found. Enlarging the opening in the scalp, the frontal bone was found to be comminuted, and the fragments had lacerated the membranes, and were imbedded in the substance of the brain. These fragments, some eight or ten in number, were carefully removed by the forceps, together with some clots.

During the operation, which was performed without an anesthetic, the patient was very restless, and it was necessary to have his hands held, as sensation was evidently very acute. After the operation he apparently became more conscious, and picked up an instrument lying by his side. He could not, however, be made to speak, or even protrude his tongue. The wound was left open, and cloths saturated with cold water were left on his head. Before leaving, ten or twelve ounces of urine were drawn off. When seen next morning his coma was profound, his pulse was seventy-five, his temperature 103° , and his pupils normal. Both right arm and leg were paralyzed, for while tickling or pinching readily caused movements on left, the right remained motionless. He had not passed his urine during the night: a few ounces were drawn by the catheter. His hair was cut short, cold was kept applied to the head, and a turpentine injection thrown up the rectum, and calomel, nitrate of potash and ipecacuanha ordered every two hours.

During the 15th and 16th, his pulse was eighty, his temperature from 102° to 103° , his respirations continually increasing in frequency, and the right sided paralysis was more and more apparent. There was no facial paralysis. His bowels were several times moved by enema. His urine was never voided voluntarily, but was drawn by the catheter twice daily; the amount was scanty. When last seen, on the morning of the 17th, he was dying, and no motion could be obtained on either side. The pulse was one hundred and twenty, and the respirations fifty-six. He died about eleven o'clock A. M., ninety-six hours after the accident.

The autopsy was made by Dr. Thomas, of Covington, and revealed a fracture as above described through the frontal bone. The edges of this fracture were quite smooth, and there were no detached fragments remaining. The opening thus left in the bone was somewhat irregular, and from its lower angles ran two lines of fracture, involving apparently only the outer table of bone, toward the root of the nose. Just above the nose the bone was comminuted over an extent of half an inch square, the fragments still remaining in place. This fracture, which had involved principally the outer table, had at one point broken through the inner table, and had also opened the frontal sinus. The dura mater at this point was not injured. From this point ran lines of fracture into both orbital plates; the plates were both comminuted. Removing the calvarium, a quantity of purulent fluid escaped. The arachnoid over the left hemisphere was lined with recent lymph; some lymph was likewise found on the right, though not so great in quantity or extent. Opposite the opening in the skull, which corresponded to the scalp wound, the dura mater was torn through, and the substance of the brain was destroyed to the depth of half an inch over the first frontal convolution. The rest of the brain was normal. There was no effusion into the subarachnoid space at the base.

We have here a man with a fracture of the frontal bone, producing a laceration of the dura mater and brain itself, who, after remaining quite rational for twenty-four hours and

free from paralysis, gradually becomes comatose, and with an increased temperature manifests a complete hemiplegia. After death, with a limited laceration of the first frontal convolution, there is a general purulent arachnitis on the side opposite the paralysis, with a slight effusion on the same side.

In considering injuries of the character of the above, several conditions must be kept in view in estimating the relation which exists between the lesions present, and the course and development of the symptoms. In every injury which is violent enough to produce fracture of the skull, more or less severe concussion of the brain occurs, so that in the above case we have to take into consideration fracture of the skull, concussion of the brain, laceration of brain and membranes, and finally the development of inflammatory action producing a purulent effusion into the arachnoid over the convexity of the hemispheres. The symptoms produced by concussion and laceration of brain substance would be manifested at once, and would follow immediately upon the injury. Our patient remained for twenty-four hours perfectly conscious and free from paralysis, so that the subsequent development of coma and paralysis could not have depended immediately upon either concussion or destruction of brain tissue, but must have depended upon lesions which were consecutive to the above injuries. The autopsy revealed a purulent effusion into the cavity of the arachnoid over the entire left hemisphere, and to a limited extent over the right. No other change was apparent, although a microscopic examination might have revealed inflammatory changes in the brain substance about the point of laceration, and also superficially upon the cortex. These changes, if present, were not apparent to the naked eye.

The symptoms dependent upon this condition—purulent effusion into the arachnoid—were somewhat delayed and of gradual development; they were unconsciousness, hemiplegia of the opposite side, and elevated temperature.

Hutchinson, in a series of papers on Injuries of the Head, published in the *Medical Times and Gazette*, brings promi-

nently forward the diagnostic importance of hemiplegia appearing some time after injury, as an indication of the presence of diffuse arachnitis. After giving a number of cases in which fracture, with or without apparent injury to the brain, had been followed by hemiplegia, and upon post mortem examination a purulent effusion into the arachnoid was found, he admits that these cases present complicated lesions, and can not in themselves determine the relation between the arachnitis and the paralysis, for in every case of fracture the element of concussion is to be taken into consideration. He presents, however, in detail a case where all complicating conditions may be eliminated, and where concussion and destruction of brain tissue were certainly absent, and yet hemiplegia was found associated with a purulent arachnitis.

In removing an exostosis from the frontal sinus of a boy, the dura mater was slightly injured. On the third day after the operation paralysis of the left arm was manifest, the patient, though first somewhat confused, becoming perfectly rational and even cheerful when aroused. On the following day, the left leg and left side of the face became paralyzed. He was still conscious and could answer questions. The day following he died after repeated convulsions, and the autopsy revealed a purulent arachnitis over the right hemisphere, with no injury to the brain. This would seem to be a pure uncomplicated case of traumatic arachnitis, where all possible complication in the way of concussion or contusion of the brain could be eliminated, and where a gradually developed hemiplegia was a marked symptom.

In the following case, the occurrence of hemiplegia with high temperature may, I think, be likewise interpreted as indicating a similar lesion: During an attack of delirium, a prisoner at the Cincinnati workhouse struck his head so violently against the walls and bars of his prison cell, that the scalp was destroyed over the top of the head for a space about four inches by three. For half this surface the bone was laid bare; over the rest the periosteum still adhered. There was a slight fracture of the bone at the anterior ex-

tremity of the sagittal suture, slightly to the left of the median line. This fracture was not more than half an inch long, and the depression was so slight that it could only be detected by running the finger-nail over the surface of the bone. When seen some hours after the accident, the man, though somewhat delirious, readily recognized me. He did not complain of his head at all, and was not apparently suffering from it. The attack of delirium was due to excess in drink, for which he had been committed to the workhouse some days before. The day after the accident his delirium passed away, and he manifested absolutely no symptom which could be referred to his wound in the head. This wound, which was dressed with dry oakum, soon cleaned off and was granulating well, and in every respect the case was progressing favorably until the fourteenth day, when, from being gay and talkative, he became dull and sleepy, and would not answer questions. When spoken to sharply and told to protrude his tongue, he did so. The day following his stupor was increased, though when aroused he rose to a sitting posture, using however only his left arm and leg. He could not be made to answer questions or protrude his tongue. It was apparent that paralysis of both right arm and leg existed. During the day he had with assistance gone to the water-closet, which was only a few steps from his bed, and passed his urine. The next morning he was removed to his home by his friends, and passed under the care of Dr. B. F. Miller, who kindly invited me to see him.

The patient was profoundly comatose, and could not be aroused. Tickling the sole of left foot or palm of left hand caused him to draw up these limbs; no irritation could call forth movement in the right side. His pulse was one hundred and twenty, and his temperature 103° . The bone was somewhat discolored about the fracture. Dr. Miller carefully chiseled away the bone through its entire thickness. It was found infiltrated with pus and quite soft. Through the opening thus made, which was on the line of the suture, a small amount of pus escaped from between the dura mater and

skull. This appeared to come from the right of the median line. The operation was without result, and the man died the following day.

Now, although there was no autopsy, we are justified, I think, in considering this a case of inflammation of the arachnoid, extending from the contusion of the bone produced at the time of the injury; and that as the paralysis was right-sided the lesion producing it must have been on the left side of the brain, so that the few drops of pus which escaped, and which came from the right of the median line, could not have been the paralyzing lesion. This pus came from between the membranes and skull, and was too small in amount to produce any notable compression. Was it possible that, instead of a general arachnitis, such as I presume existed at the left hemisphere, that compression had been produced by a collection of pus beneath the contused bone, and external to the membranes; for the length of time which had elapsed—fourteen days—precludes the possibility of its being a slow forming hemorrhage.

Prescott Hewett, in his article on Injuries to the Head, in Holmes's System of Surgery, says:—"In every case in which I have found pus on the outer surface of the dura mater beneath contused bone, I have also found inflammation on the free surface of the arachnoid." He continues:—"With this all but constant diffuse suppuration of the arachnoid, which accompanies contused bone, there is very little hope of doing any good by trephining."

Hutchinson, in the lectures above alluded to, in speaking of this subject, remarks:—"In speaking of Mr. Pott's opinion, I have already stated that in practice, when the dura mater inflames after injury to bone, the inflammation almost always involves its arachnoid lining as well as the outer surface, and thus we have arachnitis in addition."

The above opinions refer to the inflammation which follows injuries and contusions of the bone, or from extension of some acute disease like erysipelas of the scalp. Where inflammation of the bone follows syphilis, the underlying membrane is

much more apt to escape, or at least the diseased process is strictly limited to the dura mater, and results only in a local thickening of that membrane. This immunity of the brain and its membranes, in cases of syphilitic necrosis of the skull, may exist even where large pieces of bone are separated, and where the process has been manifest for a long time. This fact is well illustrated by the following case, which was under the care of Dr. P. S. Conner:

A woman of middle age, who had suffered from syphilis for many years, presented old standing cicatrices of the face, so that the mouth was contracted as to only admit the point of the little finger. Over the forehead was a circular ulcerated destruction of the skin, laying bare the bone for an extent of two inches in diameter. The entire piece of exposed bone was loose, and was easily lifted off by the forceps. The entire thickness of the skull was removed, and the membranes pulsating distinctly seen beneath. Here complete necrosis and separation occurred, without the slightest cerebral disturbance. This immunity of the membranes and brain from syphilitic disease of the bones of the head has, however, many exceptions.

After the above expression of opinions just quoted, we may fairly admit the existence of a diffuse arachnitis over the left hemisphere in our case; and that the coma, hemiplegia, and high temperature, coming on so late as it did, must have depended upon this condition. The study of these cases confirms the proposition which Hutchinson so strongly enforces, that hemiplegia is a constant symptom of diffuse arachnitis, and that coming on some time after an injury, with an increase of temperature, is an essential condition in the diagnosis; for a hemiplegia occurring some hours after an injury, may be caused by the compression from a slow hemorrhage between the dura mater and bone: in that case the temperature will not be increased.

A boy, sixteen years old, was struck on the head with an unknown weapon. He walked home and went to bed, complaining of nothing. Toward morning he roused up, com-

plained of great pain in his head, quickly became comatose, and in a short time died. There was no external injury to be seen. On removing the skull-cap, a depressed stellate fracture was found in the left temporal bone, and several ounces of blood extravasated between the bone and dura mater. This hemorrhage came from laceration of the middle meningeal artery.

The practical conclusion to be derived from the above cases is apparent:—If, some time after (probably not more than some hours) an injury to the head, coma and hemiplegia develop themselves, and no fever is present, you may fairly infer that compression is being produced by a slowly forming hemorrhage, external to the membranes; and in this case the trephine offers prospects for relief. If, however, with coma and hemiplegia, there is a high temperature, and especially if these conditions develop some days after the accident, you may expect a diffuse arichnitis, and there is little or no hope from operation.

CINCINNATI, OHIO.

FUNCTIONAL OBSTRUCTION OF THE INTESTINE, PROBABLY OF HYSTERICAL ORIGIN.

BY G. W. H. KEMPER, M. D.

About the first of last October I saw Mrs. S., aged twenty-four years, married one month. She had arrived in our city but a few days previously from her home in the State of New York. She was suffering from a trivial nausea and indigestion at first, and this had been followed by a light attack of diarrhea, which was readily controlled by astringents. The last alvine evacuation occurred Monday, the 7th day of October. No farther especial trouble was experienced for two or three days, when some uneasiness of the bowels seemed to call for a cathartic. Purgatives were repeatedly rejected from the

stomach for several days, during which time there was no especial pain, tenderness nor tympanites of the bowels; the vomiting, however, constantly became a more aggravated symptom, so that all food was finally rejected. A careful search was made for the several forms of hernia, with a negative result. On the 11th the vomited matters were stercoraceous.

I now requested that counsel might be called, and accordingly Dr. H. C. Winans was summoned on the evening of the date last mentioned. The patient was subjected to a careful examination. The temperature and pulse were nearly normal, and she stated that she suffered but little pain—rather an uneasiness. Dr. Winans thought, after some care, that he had discovered a concealed femoral hernia on the left side, but this was not confirmed. On the following morning an active purgative was administered, only to be rejected again by the stomach. From this time we gave no more cathartics by the stomach.

It now became evident that we had to deal with one of the varieties of intestinal obstruction, and accordingly we ordered belladonna in moderate doses until its characteristic effects were shown in the pupils. When active restlessness occurred we gave morphia combined with minute doses of calomel, or alone hypodermically as occasion might require. Each day, by aid of elastic tubes, we threw copious injections of warm water into the colon.

At this point I will digress sufficiently to call attention to the great value of the largest size of Nélaton's rubber catheters as a rectal tube. It readily finds its way between the walls of the intestine, and occasions no pain by its introduction. It is much superior in this respect to the ordinary rectal tube. It is to be hoped that some instrument-maker will take a hint, and make a better tube several sizes larger than the largest sized catheter.

Sometimes the injections were medicated with turpentine or castor oil, and occasionally the body of the patient was inverted and manipulations made over the abdomen to en-

courage the farther passage of liquids along the intestine. Afterward nutritive enemata were administered for supporting the patient's strength. The abdominal regions were thoroughly examined, and the rectum and vagina carefully explored, but no knot or invagination could be discovered.

Such is a general outline of the treatment we pursued up to October 21st, when three copious alvine discharges occurred in rapid succession,—being just two weeks to a day since the bowels were last moved. During the two weeks the constitutional disturbance was but slight, and her strength and *embon-point* were well preserved. The thirst was never intense; the temperature and pulse rarely strayed from the normal. The vomiting was greatly alleviated and lessened by the belladonna and opium treatment, although it was a daily occurrence and accompanied by copremesis. Once we ventured to give a pint of melted lard in repeated small portions, as recommended by some,* but with no apparent benefit, as it was vomited after an interval of a few hours.

The patient's condition never presented strikingly grave symptoms, although we could not but regard her condition as critical, and so informed the patient and friends. The lady, the wife of a clergyman, exhibited a remarkable patient and christian fortitude throughout her illness, which led her to submit cheerfully to every procedure, and doubtless contributed no little to her relief.

On the 24th, three days after the bowels were moved, the lady became morose and melancholy; this was followed by alternate fits of crying, laughter and screaming. For three days this hysterical condition continued with more or less severity, and then suddenly her mind became clear and calm, and from that time forward she rapidly regained her strength, and was soon able to attend to her duties.

We were led to overlook hysteria as a factor in the list of causes in this case, because at no time during the period of obstruction of the bowels were prominent hysterical symp-

* Especially Buckler, *Am. Jour. Med. Sciences*, Vol. 57, p. 68.

toms manifested; and yet I am led to believe, as I study the case, that it was one of the protean forms of hysteria. Flint* reports a similar case, associated with a hysterical condition. Gross merely records the fact that a hysterical condition may give rise to obstruction of the bowels, and such a possibility is not even stated by most of our standard authors. Evidently the fact of such a cause is not sufficiently dwelt upon in our text-books.

. The surroundings of my patient were such as to promote a state of high nervous excitement. She was near to a monthly epoch, recently married, had forsaken home and relatives to form new associations in a distant state among entire strangers, and entering upon a new mode of life. Such a combination of influences acting upon a sensitive and nervous constitution might well provoke hysteria; and it does no violence to our faith to believe that such an attack might expend its force upon the nerves presiding over the intestine. We have hysterical laryngismus, vaginismus, tympanites, etc., as well as spasm of other tubular organs; and why not a similar condition of the intestinal portion of the alimentary canal? Further, the symptoms in this case did not indicate intussusception. No tumor was discernible per rectum, nor by palpation of the abdomen. No approach to a state of collapse or the Hippocratic countenance. No blood was passed per anum—a sign so characteristic of intussusception. “The so-called *dysenteric evacuations*, consisting of *bloody mucus*, are almost never absent in invaginations of the intestines, no matter where its seat may be.” (Ziemssen.) A patulous condition of the anus, regarded as a valuable symptom of invagination, was absent in this case.

* Practice of Medicine, first edition, p. 362.

DERMOID CYST OF THE LUNG.

BY G. C. SMYTHE, M. D.

On Thursday morning, January 31, 1879, the dead body of an unknown woman was found in bed at a boarding-house in the city of Greencastle, Ind. Nothing could be ascertained of her history prior to the evening preceding her death. It was shown by the evidence elicited at the coroner's inquest that she had arrived in that city by the Vandalia railroad line, on the eastward-bound 4 P. M. train, and that she had applied at three different places before she obtained accommodations for the night. By the evidence of those with whom she had conversed, it was shown that she appeared to be greatly exhausted, was breathing with much difficulty, suffering severely from paroxysms of coughing, so much so that it was with difficulty that she conversed at all, and her hands and lips were of a livid, almost purple hue. She stated to the lady with whom she stopped for the night that she had been suffering with what the physicians had told her was consumption for about three years, for which she had taken large quantities of medicine, including cod-liver oil, etc. She retired early, and at 8 o'clock on the following morning was discovered to be dead, lying upon her left side. On the table close by the bed was an empty four ounce vial, and by its side a dessert-spoon, which did not belong to the family who kept the house.

The body was removed to an undertaking establishment, where, at 1 o'clock P. M., Dr. E. B. Evans and myself made a post mortem examination of the remains, with the following result: Body slightly emaciated; no marks of external violence; five feet four inches high; light hair, hazel eyes, and fair complexion; age about thirty or thirty-five years. The contents of the cranium were found to be normal, as were also the abdominal organs, with the exception of a slight enlargement of the liver. The uterus contained a fetus of

between four and five months' development. The lower and middle lobes of the right lung were hepatized, and the upper intensely congested. Heart normal in structure, although displaced as hereinafter described. In the left cavity of the chest was found evidences of a former pleuro-pneumonia, the lower portion of the pleural cavity being filled with a serous exudation, with which was mixed a small quantity of purulent matter and some flakes of a fibrinous exudation, which had separated from the inflamed and thickened pleura. This sero purulent collection amounted to about three pints. The entire upper portion of the left side of the chest was filled with what proved to be a large dermoid cyst, which extended from above downward to the lower margin of the sixth rib, and across, impinging upon the right cavity of the chest, displacing the mediastinum, pericardium and heart, until the latter rested beyond the union of the ribs with their cartilages, making a displacement of this organ equal to nearly six inches. A large portion of the lining membrane of this cyst was composed of true dermoid tissue, from which grew a considerable quantity of hair, some of which was eighteen inches in length, and thoroughly mingled with the sebaceous contents of the cyst, which were about the consistence of Dutch cheese, and two and a half pounds in quantity.

On the posterior and lateral parietes of the chest the pleura costalis and pleura pulmonalis were firmly adhered and much thickened. Imbedded within the thickened wall of the cyst was a genuine bone of adventitious growth, enveloped in a true periosteum, and composed of dense osseous tissue, weighing one hundred and twenty grains. It was developed from numerous points of ossification, which united in such a manner as to form four well defined semicircular or horse-shoe shaped portions of bone, which are curved with so many irregularities in the way of processes, angles, surfaces, etc., as to defy description. Measuring from the largest portion of the bone to the extreme point of the largest semicircle, in a direct line, the distance is two inches. From this latter point, which is the beginning of another semicircle, to its extreme point, in a

direct line, is one and three-eighths inches. From this point to the place of beginning is one and seven-eighths inches.

A large number of instances are upon record where hair has been found growing in abnormal positions. Dr. Benjamin Godfrey, in a work on Diseases of the Hair, published in London, 1872, has collected several cases of this kind, some of which will be quoted:—"Pliny and Valerius Maximus inform us that the Messenian warrior, Aristomenes, who died at Jabysus, in Rhodes, 668 B. C., had a heart covered with hair. Plutarch states that the same thing was found in the case of the warrior Leonidas. We learn from Cœlius Rhodiginus that Hermogenes, of Tarsus, when dead, furnished another specimen of this strange abnormal condition."

There is some reason to suppose that a mistake has been committed in the preceding cases, or at least that a mistranslation of the original text has been made. The meaning evidently intended to be conveyed is, that the external region over the heart was covered with hair, because no dissection of the human body was ever made until after the school was founded at Alexandria, 320 B. C. Neither were there any post mortems had. Even in the process of embalming the dead, the heart and kidneys were not removed. It was contrary to the religious belief of the ancient Greeks to do anything of the kind. They believed that the souls of the departed were compelled to wander upon the banks of the river Styx until the body was disposed of.

"Slonatus found hair in the blood of a lady; and Cardan, in that of a Spaniard. Tyson saw hair floating in the blood of a damsel. Scultetus beheld in the abdomen of a woman, who had died of dropsy, a curl floating in the fluid. In the Imperial Pathological Museum at Vienna is exhibited a mass of hair taken from the abdomen of a child six years of age. In 1858, at Guy's Hospital, the post mortem of a woman revealed three perfect teeth and a mass of hair of a brown color in the ovary. The bursting of the cyst had caused her death. The peculiarity of this case was that perfect skin and sebaceous glands to each hair were visible. Many cases are re-

corded where hair has been found in ovarian cysts. Several cases are recorded of hair being found in the bladder, and in one case a large mass of it was passed from the bowel; but in these cases a dermoid cyst had probably opened into these outlets. Hair has been found in the mastoid cells of the temporal bone, tympanum of the ear, in the substance of the brain, and in common abscesses. In the testicle of man, hair and teeth have been found, thus closely resembling the contents of some ovarian cysts. One case is recorded of hairs, two inches long, growing from the mucous membrane of the female bladder. Bulbs were visible in about one-third. Dr. Garrod relates a case in which a little girl, only eleven years of age, had a multilocular cyst of the ovary which contained a mass of hair, fat and fragments of bone. Dr. Tyler Smith exhibited a dermoid cyst with teeth and hair that had passed through the rectum."

A dermoid cyst is a form of disease seldom met with by the ordinary practitioner. According to Rindfleisch, three-fifths of these growths are located in the ovary; their next most frequent situation is the testicle. These cysts frequently contain teeth composed of the same elements as the ordinary teeth with which we masticate our food. The same author states that "actual bones have formed in cystic walls which may be supplied with a periosteum, and vessels quite like the bones of the skeleton. Henle found in a dermoid cyst a bone one inch long, of horse-shoe shape, which had serrated processes, with which again wedged-shaped bodies of the size of a hempseed, supplied with loose articular capsules articulated." Rindfleisch is also of the opinion that the fact that bones, hair, teeth, etc., are found in these cysts does not justify the conclusion that they are the débris of decayed fetuses, because they are found in situations which renders this explanation unlikely, and cites the case of Cloetta, who described a case of dermoid cyst of the lung.

LECTURES ON THE SURGERY OF THE FACE.*

BY FRANCIS MASON, F. R. C. S.

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LECTURE II.—PART I.

You will remember that in my last lecture, I alluded to some of the principal diseases of the face, and now with your permission I will refer to a few of the injuries incidental to this part.

Considering its exposed situation, the face has comparative immunity from accidents of all kinds, and this immunity may be thus explained:—First, that the head is extremely movable in all directions; and, secondly, that the hands and arms intuitively protect the part.

It is not within the scope of this lecture that I should speak of fatal injuries occasioned by gas explosions, railway accidents, the bursting of shells and gunshot wounds received in warfare, which I think may be well left to the imagination. I shall therefore confine my observations to such injuries as are usually remediable, and which are therefore consistent with life.

Lacerated wounds of great extent are frequently occasioned by broken glass. Thus, not long ago, I saw a barmaid whose face was terribly disfigured by the bursting of a soda-water bottle; and also another patient, a plumber, who was rendered a pitiable object by falling head foremost for a distance of twenty feet through a skylight. Again, I once had the opportunity of seeing a cabinet-maker who had a very severe wound of the face occasioned by a circular saw. But perhaps the worst examples of such injuries were two, one in which the face was literally smashed by a cricket-bat coming in full contact with the face, and the other was the result of a direct blow on the part from a cricket-ball.

* Delivered at the Medical Society of London, January, 1878.

Injuries of the face must be treated on the ordinary principles of surgery, but in this region it is of paramount consequence to procure, if possible, immediate union, and thus preserve the patient's personal appearance. Therefore, after the wound has been thoroughly cleansed from dirt, glass, or other foreign substances, the edges should be brought together accurately with good sticking-plaster. Sutures may be employed, but they should be dispensed with if possible, as they cause additional scars, but if used they should be of fine silk, which is, I think, preferable to silver wire. The removal of the wire requires some little skill, and I am sure that if there be any tension, the wire cuts its way through the cutaneous structures much more rapidly than silk does.

In injuries of the lips, harelip-pins with the twisted suture are very commonly used to unite the parts, but I employ, by preference, the ordinary interrupted suture, made of silk. Even simple strapping, efficiently applied, answers the purpose completely. This woodcut (Fig. 1), taken from a photograph, illustrates a case in which a portion of the lip had been bitten away by a woman, and in which the parts were successfully brought together with strapping only.

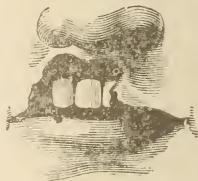


FIG. 1.

In speaking of injuries of the face, Mr. Holmes Coote aptly remarks "that wounds in this region caused by the violent action of blunt instruments have often the same appearance as if inflicted by the sharp cutting edge of a knife. For example, the sharp border of the superior maxillary and malar bones, or the edges of the teeth, will, when a blunt body presses against them, cut through the skin and subjacent soft parts, and cause an injury closely resembling an ordinary incised wound." As an instance in point, Mr. Erichsen relates the case of a man who was admitted into the hospital drunk and much bruised about the face. "Shortly after admission he vomited a large quantity of blood, which was at first supposed to proceed from some internal injury, but, on examining his lip, it was found that the hemorrhage was from the coronary

artery of the lip, which was divided with the mucous membrane.

In injuries of the face in children it is of great moment that the scar should be reduced to a minimum, and the same rule applies, as already referred to in my previous lecture, to wounds made by the surgeon in removing cysts or other tumors, *nævi*, etc., at an early period of life. It is, I suppose, an accepted pathological axiom that all scars grow in proportion to the growth of the body; and the question of the probable disappearance of cicatrices is one of more than ordinary interest, especially from a medico-legal point of view. As bearing on this question, it will be in the recollection of the fellows that Mr. W. Adams read a paper on this subject at this society in 1873, and alluded to four cases, amongst them one of a young lady who, when a baby a year old, was operated on for *nævus* by excision in the region of the breast. The scar left at the time was less than an inch and a half, but at nineteen years of age it was found to have increased enormously, measuring three inches in diameter. The case showed that when a portion of the skin has been destroyed, the cicatrix appears to be persistent through life, and grows *pari passu* with the rest of the body, or rather with the portion of the body over which it may be placed. The increased size of the vaccination scars observed in the adult seems to prove this. Sir James Paget puts the case well in saying that "the scar of a child, when once completely formed, grows as the body does, at the same rate and according to the same general rule, so that a scar which the child might have said was as long as his own forefinger will still be as long as his forefinger when he grows to be a man."

Apropos of this part of the subject, you will perhaps remember that about two years ago I showed a patient, a girl aged fifteen (photograph shown), who had a cicatrix, about an inch and a quarter in diameter, situated over the left breast, which was the result of an operation for *nævus* performed when she was three months old, the scar after the operation being about the size of a sixpence. As the breast developed, so the cica-

trix became proportionately larger. I venture to cite this case, not as strictly relating to the part of which I am now treating, but because it illustrates in a remarkable manner the fact that cicatrices increase not only in proportion to the growth of the body, but that they grow in proportion to the development of the organ on which they are placed.

I am, however, glad to be able to adduce a more apposite example to illustrate the growth of such cicatrices (represented in Fig. 2). In November last a young man consulted me with reference to a circular scar situated on his right cheek, and which was thought to be growing rapidly. He was eighteen years of age, and his mother informed me that when he was a baby he had a very small *nævus* in the situation of the cicatrix, which was cured by ligature. His mother was assured at the time of the operation that as he grew up the scar would disappear, and she was therefore rather astonished, not to say disappointed to find that it was now three times as large as it was in baby-hood. The explanation of this enlargement lay in the fact that the young man was getting, as his mother remarked, unusually "fat in the face."



FIG. 2.

Burns and Scalds.—With regard to the management of burns and scalds in the region of the face (and I allude to such cases as are not beyond surgical aid), the popular treatment at the present day seems to be the application of carron oil. At St. Thomas's Hospital we frequently employ this remedy; but in the children's ward, into which these accidents are almost daily admitted, a mixture of whiting and acetic acid is used. It is prepared in the following manner: One part of acetic acid is mixed with twelve parts of water, and whiting is added until the fluid becomes of the consistence of cream.

The mixture is applied lightly with a brush during effervescence, and in addition the part is usually covered with soft linen and cotton-wool. The soothing effects of this preparation are so marked that I confidently recommend it for more general use. It is very clean, and is especially useful in burns and scalds of the face and neighboring parts. The deformities occasioned by burns and scalds are well illustrated in Figs. 3, 4, 5, and 6 taken from photographs; but of these, with their treatment, I shall speak in my next lecture.



FIG. 3.



FIG. 4.

Injuries of the Parotid Gland and its Duct.—Cases are reported in which the duct of the parotid gland has been ruptured subcutaneously by a blow, and in which the salivary secretion has burrowed in all directions, giving the patient an emphysematous appearance, causing much disfigurement of the face and neck. The duct has also been partially destroyed by ulceration in severe cases of lupus or cancrum oris; and it has been divided, either of necessity or unintentionally, by the surgeon in operating on the cheek, or in removing tumors from the jaw. Saber wounds have in some instances been followed by salivary fistula. In a case of this kind of fistula which resulted from the patient falling on a red-hot poker, I adopted a simple plan of treatment. A probe was passed through the mouth and made to emerge from the fistulous aperture in the cheek; then, having bent the instrument

slightly, it was pushed along the duct as far as possible in a direction toward the gland. The probe thus fixed was retained for nearly the whole of the day, and at night it was removed. Three days afterward it was again introduced through the mouth, and passed readily toward the gland. After the first introduction the saliva ceased to flow from the opening in the cheek.

Mr. Pick, of St. George's Hospital, has treated a case much in the same manner in a patient aged twenty. An attempt was made to pass a probe "in order to ascertain if any opening existed into the mouth," but the instrument being too



FIG. 5.

large, further attempt was abandoned until a smaller one could be procured. "The following morning the patient was surprised to find that her pillow, which had been previously saturated with moisture, was quite dry, and upon examination it was found that the opening was completely closed."

Fistulous openings in connection with the parotid gland itself are of very rare occurrence, yet they are known to have been produced by the opening of an abscess behind the jaw, and have even followed a peculiar inflammation of the gland structure. I had the opportunity of watching a case of this kind occasioned by a burn which destroyed the ear and neigh-

boring parts. There were nine or ten minute spots over the parotid gland from which saliva exuded. The patient got quite well after a free application of the solid nitrate of silver and the firm application of a bandage.

Sloughing of the Face.—Owing to the extreme vascularity of the part, sloughing seldom occurs on the face, and, when met with generally, depends upon the direct application of intense heat, such as red-hot iron, etc. Injuries even at a distance from the face, say in the neck, are sometimes followed by sloughing of the nose or ears—that is to say, parts to which the blood is with most difficulty sent. Sir James Paget, in his



FIG. 6.

lectures on Surgical Pathology, page 25, quotes several examples to show how portions of the body may mortify from the absence or deficient supply of fresh blood, and refers to a specimen in the Museum of the College of Surgeons, which is of especial interest in connection with the surgery of the face. The specimen was the larynx of a man who, while in low health, cut his throat, and suffered a great loss of blood. Before he died his nose sloughed.

Treatment of detached soft parts.—However mutilated the skin of the face may be, the surgeon should under all circumstances endeavor to bring the edges of the wound accurately

together, and even if a portion should be completely detached by accident or design, an attempt should be made to restore the part to its pristine position. For example, there are numerous instances on record in which the nose has been replaced, and an interesting example of this kind is reported by Dr. Malfatti. A soldier had his nose cut off by a saber. The piece was taken up from the ground on which it lay, was cleaned and reapplied, being secured in its place by sutures. The case did perfectly well. Again, Mr. Spencer Watson relates the case of a gentleman who, when he was a child, cut off a portion of the end of his nose with a carving-knife. His mother, with great presence of mind, instantly replaced it, and kept it in position by means of a plaster composed of brown paper smeared with soap and sugar. The severed parts completely united, and only a trace of the original injury was left. A somewhat similar case in an adult came under my observation when I was house surgeon at King's College Hospital. In this instance I reapplied the greater part of the nose, and Mr. Slayter, the then house surgeon at the Westminster Hospital, afterward reported three cases, one in which the nose was readjusted, the second in which three teeth had been replaced, and a third in which a portion of the scalp had been knocked off with a quart pot, and had been sewed on successfully.

Injuries of Bones of Face.—With regard to injuries of the bones of the face, perhaps the nasal bones are those most frequently fractured or dislocated. In either case the parts should be brought into their normal position as soon as possible after the accident, and if once in their proper place are little apt to shift, because, as is well known, there are no muscles directly attached to them. Mr. W. Adams, who gave us a paper on this subject in 1875, observes that such cases may be divided into two classes,—first, those in which the injury is limited to the cartilaginous portions; and, second, those in which the nasal bones are fractured. In all these cases the principle he advocates is to straighten the bent cartilaginous septum with a pair of strong forceps with flat parallel blades,

and when the nasal bones are depressed, to raise them also with the same instrument. Dieffenbach operated by a subcutaneous method in two cases in which the nose was thrown outward on the cheek, one nostril being turned upward and the other downward. He introduced a narrow bistoury under the skin of the bridge, dividing the union of the cartilage with the bones, and separated the alæ and septum, every part of the operation being subcutaneous.

Whilst it is expedient in adults to bring the displaced parts in apposition as speedily as possible, it is even of greater importance to effect this in children, for Mr. Hilton has shown that the expansion of the sphenoid bone pushes forward the vomer and the septum nasi, and subsequently also the nasal bones. Any injury, therefore, of the nasal bones, attended with displacement to either side, would necessarily result in a progressive deformity, since the bones would continue to grow in the abnormal direction.

In cases of severe burns, involving the eyelids or the nose, great care should be taken to retain the external apertures. Mr. Le Gros Clark has reported a case which he treated successfully by incising the anterior nares and keeping the parts open with a trocar.

Blows on the nose are occasionally followed by abscess and exfoliation of the nasal bones; but such consequences may, in many cases, be averted by timely incisions, as in a case under the care of Mr. J. Hutchinson, in which there were two inflamed swellings of equal size situated on either side of the bridge of the nose in such a manner as to extend its transverse measurement to about an inch and a half. The abscesses were laid open freely, and the patient did well. Injuries to the nose of even a trivial character are occasionally followed by a fatal result. Thus, Dr. Keeling, of Sheffield, reports the case of a patient who was struck with a piece of iron on the forehead and nose. There was a simple fracture of the nasal bones without much displacement. The patient died, and on opening the calvaria the dura mater was found much lacerated. Five ounces of pus escaped, and the crista galli, with the

perpendicular plate of the ethmoid, was found separated from the cribriform plate, quite loose, and imbedded in the substance of the brain. Mr. Bryant also quotes a case in which a severe blow upon the jaw produced a fracture of the middle fossa of the base of the skull.

Emphysema.—Emphysema of the face and neck is not unfrequently met with when the bones of the face or the frontal sinuses are damaged. Thus, I once saw a man who, whilst walking, received on the right side of his face the whole weight of a long rod of iron which was being carelessly carried by another person. There was a very superficial wound situated over the malar bone, and no apparent displacement of the bones. In two or three days, however, the patient's face on the injured side was very puffy and emphysematous, and was nearly twice its normal size. The swelling entirely disappeared in ten days.

The following case occurred in the practice of Mr. Prescott Hewett. The patient was twenty-three years of age, and fell during a fit on the left upper jaw, which was displaced, but firmly fixed. The following day the emphysema had spread to the hyoid bone, and went as low down as the cricoid cartilage; but it all disappeared within a week from the time of the accident, and the patient made a good recovery. Emphysema of the eyelids, resulting from fracture of the os planum of the ethmoid, has been referred to by Dupuytren.

Dr. Keith, of Aberdeen, has most truly observed that "wounds of the face, however ghastly to look at, are not dangerous to life," and some remarkable recoveries are on record after very extensive injuries to the bones and soft parts in this region. The following may be taken as an example, and the patient was under the care of Baron Larrey. The patient was a soldier aged twenty-three, who attempted suicide on March 4, 1823, by shooting himself. "In the left ramus of the lower jaw there was a large irregular aperture by which the ball had entered. It made its way through the lower and upper jaw, the left nasal cavity and orbit, and had come out at the left side of the root of the nose. The jaw bones were

crushed to fragments, part of the tongue was lacerated, the lower parietes of the orbit fractured, and the eye had burst the eyelids; the nose and upper lip were torn into several flaps, and the lachrymal and frontal bones fractured." He made a good recovery.

Another case is reported by Professor Longmore, of Netley, which he believed to be unique, inasmuch as it was followed by total dumbness without direct injury to the organ of voice. A soldier was struck just below the center of the lower lip during a charge of his regiment on September 21, 1860, by a musket-ball. The two incisors, the canine, and one bicuspid of the left side were carried away, and the ball lodged in the soft tissues of the floor of the mouth behind the frænum linguæ. Immediately after the injury, there was complete loss of the power of articulation. The ball was not removed until the twenty-third day after the injury, and was then extracted from within the mouth. The sequel of the case may be briefly told, for about two years after (at the end of July, 1862) the man suddenly recovered his speech while in a state of excitement during an altercation at a public-house. Prof. Longmore was inclined to attribute the dumbness to "nervous shock," in addition to the structural lesions, and to class the case with those instances of temporary aphonia which sometimes occurs from hysteria, fright, etc., and where the recovery of speech is often sudden. Dr. Aitken, however, who saw the case, thought that the loss of voice was due to injury of the muscles of the tongue and to the disturbance of the ninth nerve.

A third interesting case is reported by Dr. McQuillen, of Philadelphia, of which I show you drawings.

Dislocation of the Superior Maxilla.—Simple disarticulation of the superior maxillary bones is a very rare accident, but Mr. John Salter, of Tolleshunt d'Arcy, reports such a case. "The dislocation was," he says, "beyond doubt, inasmuch as the bones, in their wedge-shaped entirety, could be freely moved backward and forward, upward and downward, and from side to side. The separation of the malar bones from their articulation was no less distinct. A gutta percha splint

was applied, but it was several months before the patient, aged thirty, could bite solid food." In this case, at the time of the accident, the face felt like a quantity of "loose bones." Mr. South, in speaking of a somewhat similar accident, describes the bones as feeling like "beans in a bag."

A curious case of dislocation of the left superior maxilla was under my care in the summer of 1876. The patient was thrown from a cart, and alighted on her left cheek on some prominent object (she believed a loose stone). On examination a distinct depression of about half an inch was seen on the injured side, and on placing the finger behind the soft palate, there was an evident prominence. The patient was perfectly free from pain or annoyance, and left the hospital in about ten days, apparently as well as ever, with the exception of the depression above referred to. Mr. Houghton reports a case of depression of the superior maxillæ, in which the parts were so displaced that the patient could not protrude the tongue until the bones were readjusted.

Dislocation of the Lower Jaw.—The usual causes of dislocation of the lower jaw, such as yawning, the attempt to bite an apple or other substances, are too obvious to need reference at the present time. This luxation is known to occur occasionally, though very rarely, during the extraction of teeth; and Mr. James Salter, in a series of papers, alludes to such cases, and, with characteristic candor, speaks of this accident occurring in his practice when he was taking a model of the lower jaw in a patient aged seventy. Mr. Salter took the upper model first, and then having taken that of the lower jaw, he noticed that the patient did not shut her mouth; it was fixed wide open. The reduction of the dislocation was easily effected, and the patient stated that she frequently "put out" her jaw in yawning and laughing; and Mr. Merson also relates a similar case. Such displacements have been known to occur during a laryngoscopic examination, and I know of one instance in which, in the operation for cleft palate, the gag had been so vigorously applied as to produce a similar deformity.

Mr. Edwin Morris, of Spalding, refers to a case of dislocation of the jaw which he believed to be the result of tongue-sucking. The patient was a young lady, aged fifteen, who was awakened from her sleep with pain under her ears, and inability to close the jaws, or to articulate plainly. The patient was addicted from infancy to tongue-sucking during sleep, and Mr. Morris thought that the continued action of the pterygoid muscles had so preternaturally loosened the ligaments and muscular structures supporting the joints as to render them unable to resist their violent action during sleep.

Dr. Ballard speaks of a similar dislocation, the result of thumb-sucking. In reference to thumb-sucking, I may add that Dr. Dobell has observed in patients who are given to this practice that there is a peculiar and rather common deformity of the chest, caused by the habit of sucking the thumb in infancy and early childhood. The weight of the arm on the thorax of the child during sleep produces depression of the ribs in the line occupied by the arm when the thumb is placed in the mouth.

I need not enter fully into the various theories as to the mechanism of dislocation of the lower jaw. Petit, Boyer, Sir Astley Cooper, and others have pointed out that the condyle lies in front of the transverse root of the zygoma, and is there held either by muscular contraction or by the resistance of the zygoma. Malgaigne and Nélaton thought that the coronoid process came in contact with the malar bone, and believed that, in order to effect reduction, it was only necessary to place the two thumbs on the coronoid processes after the patient has opened his mouth, without taking hold of the jaw or making any fulcrum, to press the condyles back into their places. Mr. Barnard Holt, writing in 1840, suggested a somewhat similar method, but depressed the angles of the jaw from the outside. Thus, he says, "the surgeon stationing himself behind and above the patient, places the thumb of either hand upon the angles of the jaw on a level with the insertion of the posterior fibers of the masseter muscles, and then presses downward and backward." Other observers, as Maisonneuve

and Weber, believe that the coronoid process does not become fixed against the malar bone; and Mr. Heath corroborates their view on this point, for, from experiments he himself made, he found that "in the macerated skull it is easy to dislocate the condyle so far in front of the articular eminence as to cause the coronoid process to be hooked against the malar bone, but this is by no means easy on the subject, even when the parts are dissected, and can only be accomplished by tearing the structures of the joint very considerably."

The relaxation of muscles appears to be the chief means of effecting the reduction, and thus it is in many instances sufficient to divert the patient's attention. M. Clement speaks of cases in which, after very painful efforts at reduction, the condyles suddenly returned to their cavities during an examination of the mouth. A remarkable case, illustrating the spontaneous reduction of the lower jaw in dislocation, was under my observation at St. Thomas's Hospital two years ago. The patient was a middle-aged woman, who stated that for several years she had been subject to luxation of the lower jaw, which happened sometimes twice a week. At times the dislocation was easy of reduction, but she had got so accustomed to the condition that she was in the habit of going to bed with the parts unreduced, and she invariably found when she awoke that the jaw was in its proper position.

FOREIGN CORRESPONDENCE—OUR LONDON LETTER.

LONDON, April, 1879.

MY DEAR YANDELL: The theme of my discourse in my last letter was chiefly antiseptic midwifery; now I propose to give you something on diseases of the skin and hair. I know you have an interest in the first; and admire (or at least I give you credit for it) the latter, when it is well attended to.

Mr. Jonathan Hutchinson read an address the other day on "Syphilis as an Imitator." He pointed out that in many of the syphilides the adjective "syphilitic" is prefixed to some ordinary disease, as psoriasis for instance. He said there was no difficulty in explaining why syphilis should be an imitator of old types, and not an originator of new ones, if we admit as probable that almost all possible forms of morbid process existed already independently of it. Syphilis can not devise for itself any new set of organs; nor can it lay down any new lines along which morbid action, once originated, may spread. It must work in the old grooves, and travel by existing paths. In the form of syphilitic eruption, which looks like small-pox, the rash is scattered symmetrically over face, limbs and trunk. It may be discrete or confluent, according to its abundance. The pimples are hard and horny at first; they have depressed centers; they form adherent scabs; and they leave scars. The difference lies in the comparative slowness with which the syphilitic rash runs its course. He had seen, he stated, several cases which had been treated at the small-pox hospital, which were undoubtedly syphilitic. Yet so late as 1877 he himself fell into error. The patient had just landed from a voyage on board ship, and was covered from head to foot with crusts exactly like those of variola in the third stage. Some had fallen, and left deep scars behind them. The stages had been unusually long, but still had not exceeded possible limits. He says:—"I questioned him as to syphilis, and examined his penis and throat, but without finding any reason for doubting his word. The sequel, how-

ever, proved that it was syphilis. The scabs took months to fall; and just as he was recovering from the eruption, iritis manifested itself, which was unquestionably syphilitic."

Slow progress is the one difference between the two exanthems. The similarity is produced by the fact that syphilis in these cases attacks precisely the same anatomical structures as those in which the variolous pustule is developed.

Syphilitic roseola is well known. There is a mottled congestion of the skin in ill-defined crescentic patches, exactly like measles. As in measles it is almost wholly an erythema, and if the skin be stretched the vessels may be emptied and the rash vanishes. Syphilitic roseola is less bright in tint and less conspicuous than true measles. Pemphigus and lichen are both simulated by syphilis. As to syphilitic psoriasis palmaris, he said that the widely-spread creed that it was always syphilitic is conclusive in support of his proposition. Lupus is one of the maladies which syphilis simulates. Lupus consists essentially in the growth of cell structures in the true skin, which destroys the tissues; when it retrogrades and leaves a scar. Syphilis mimics it in all its varieties. Phagedenic syphilis simulates ulcerating lupus. At other times this form of syphilis closely simulates rodent cancer. In iritis and keratitis, syphilis follows non-specific disease; as it does when the retina is the seat of disease. The rest of Mr. Hutchinson's most interesting and instructive paper I shall abstract in my next letter. I trust he will tell us something about the effects of syphilis upon the teeth. I more than suspect that he will tell us that there syphilis imitates certain modifications which occur under other circumstances than those of inherited syphilitic taint.

At a recent meeting of the Pathological Society, Mr. Malcolm Morris showed some beautiful microscopical specimens and drawings of a peculiar but interesting disease, which is known by the name of "piedra." A special interest was aroused by these specimens, owing to the fact that nodular diseases of the hair in general had formed the subject of a controversy during several weeks last summer, in the pages of

the London Lancet. It was thought by some that "piedra" was nothing more or less than the trichorexis nodosa of Hebra; but now it has been clearly shown by Mr. Morris that there is no kind of resemblance between the two in their minute histological condition, however much they might resemble one another in their naked eye appearance. The word "piedra" is the Spanish for stone, and is used to designate a certain disease of the hair, that occurs in the form of minute nodes, which rattle like stones when the hair is combed. This disease has only been found in one state of Columbia, that of Cauca. It was originally described in a paper by Dr. Nicolas Osorio of the University of Bogota, from which the following is an extract:

"In 1874, Dr. Evaristo Garcia gave me a specimen of hair which had been sent to him from Cauca, and asked me to study in it the disease known in that state by the name of stone (piedra). Dr. Gutierrez Portillo was kind enough to let me have a few more specimens some time afterward. On examining one of these hairs with the naked eye, several very small tubercles of a round shape are seen, about the size of the head of a common pin, of a black color, and possessing a horny consistency. They are situated at almost equal distances apart. On microscopical examination with a low power no organization at all can be detected. Magnified three hundred and fifty times and treated with glycerine, scales similar to those of the hair epithelium are brought into view. On teasing these tubercles with a needle, they are seen to be hard and horny, and the small particles which are thus separated exhibit the characters of the hair epithelium. When this little tubercle has been taken off, the hair remains almost natural, showing only a kind of circular depression around the spot, which the tubercle had been filling up. These tubercles show more of the characters of the epiphytes, as they have been described until now. They do not resemble the puccinia, or the mucor, or the aspergillus, or the oidium, or the achor, or the microsporon, or the trichophyton. It can not be an epizoon either. Considering the characters of the hair epithe-

lium, and their resemblance to those offered by the elements in which the tubercle is separated by teasing, I believe that this disease is produced by the agglomeration of the epithelium at certain points of the hair. The natives of Cauca cure this disease by thoroughly greasing the hair; at the end of twenty-four hours the tubercle may be easily detached. It is known by experience that the disease is not contagious. The true cause which produces it is still unknown. Dr. Fontal believes that the excessive use of linseed-water for washing the hair has much to do with its production."

It is clear from this that Dr. Osorio does not believe in the parasitic nature of the disease. The specimens shown by Mr. Morris were given to him by the same gentleman that had supplied similar hairs to Dr. Osorio, namely Dr. Portillo, a physician now resident in Paris, who also supplied many facts concerning the history of the disease. It has never been known to occur on any hair but that of the head; very rarely, if at all, in men. It never affects the roots of the hair; and usually begins half an inch from the root, then spreads onward, or is rather pushed on by the use of the comb. The number of nodes varies from one to ten on each hair; two nodes are never found together, but at certain distances. When the whole of the hair of the head is affected, there is a peculiar acid smell given off. The disease never occurs in cold regions, but in the warm and sheltered valleys. It is supposed to be caused by the use of mucilaginous fluid, like linseed-water, with which the women wash their hair to keep it smooth and glossy. Another hypothesis is that, washing in certain stagnant rivers produces it. The use of these fluids will not produce the disease in a cold climate; this has been proved by experiment. It, therefore, seems that two factors are necessary for its production—one, a thick fluid containing fungoid elements; the other, the heat from the sun to cause these elements to mature. The hairs themselves, as seen with the naked eye, are dark in color, weak and flaccid. The small nodes, or piedra masses, occur at irregular intervals; they are intensely hard, producing a rattling noise, when the hairs are

beaten against glass. In attempting to cut one of the nodes with an ordinary knife, great difficulty is experienced, the knife slipping off at either side; but when considerable force is used, the node breaks with an irregular fracture.

Under the microscope (Hartnack No. 8), the appearance is that of a honeycomb-looking mass, consisting of spore-like bodies, deeply pigmented on the surface. There is a uniformity about the arrangement of these bodies, the rows of minute cells lying parallel to each other. In the earliest stage of development, a single cell is seen lying on the hair; similar cells form laterally so as to constitute radiating columns of cells. As soon as the mass has grown to a certain size, the surface cells seem to alter in shape, becoming darker in color, forming a pseudo epidermis. Near the periphery, but within the mass, here and there are seen more or less oval-shaped cavities, containing elongated cells.

When the node is broken up, and carefully washed in liquor potassæ and prepared in glycerine, these elongated cells appear like tufts attached by their base to one of the small, rounder cells. This condition corresponds very much to that seen in the group of fungi called ascomycetes. At all events, there is no question as to the fungoid nature of the disease.

From the above description there can be little doubt that the disease is not the same as the fragilitas crinium of Wilson, or the trichorexis nodosa of Beigel and Hebra; but at the same time it might be confounded with the disease which created such excitement a few years since, and known as the chignon-fungus. Dr. Tilbury Fox went so far as to state this as a fact at the recent discussion on the subject. Whether the chignon disease was parasitic or not, is hardly the question in dispute; but at the same time if it is a fungus, a careful examination of Beigel's plate, in the Pathological Society's Transactions, would soon satisfy the observer that it is totally different in character from the fungus of piedra, now for the first time exhibited and described by Mr. Malcolm Morris. So much, then, for the dermal appendages and their maladies.

Mr. Richard Davy has, with his wonted good-humor, blended with sagacity, been delivering himself of a few burning truths about the surgical aspect of our present mode of railway traveling. He does not think the surgeon's duty confined to patching up the mangled victims of an accident, but thinks surgeons have an equal standing for the prevention of surgical accidents that are preventable, with that of the International Commission of Medical Men for the Limitation of the Plague. He first censures running human beings and freight on the same line of rails, and points out how few accidents have occurred on the underground railway, where the traffic is almost exclusively passengers. Then he makes merry over the present senseless arrangements by which a ticket can only be procured a certain time before the departure of each train; and that, too, only at one microscopical pigeon-hole, around which there is a dense crowd. At last, after much struggling, much loss of time, and not rarely of temper with some unintelligent or perverse-looking clerk, the would-be passenger has to hurry over the dangerous ditch betwixt the platform and the railway carriage. Having gained the pen in which he is doomed to travel, the unfortunate passenger is locked in, so that if there is an accident happening he may have no chance of escape. Why, he justly remarks, should the majority of sensible travelers contract for imprisonment, and submit to it, in order that security may be granted a drunken fool or an idiot? The excuse made is that this plan economizes labor in collecting tickets.

There are not only these dangers of accident to be encountered, but Mr. Davy credits our railway system with cultivating much disease of the bladder and kidneys as well as of the bowel, by their latrine arrangements, which he condemns in eloquent terms. Then he refers to the present arrangements for communicating with the engine driver or guard. Who, he asks, will smash his fist through an exaggerated watch glass, and correctly turn the handle in the course of a struggle, or in a state of collapse? or who will have the presence of mind in anticipation of an assault to ascertain in which

side of the window there hangs an inconveniently long cord? or who cares to know that if communication with officials has been successfully achieved, inquiries may be made after irreparable mischief has been done. The days of our insular seclusion and approval of shut-up boxes must surely soon pass away, and lead to the public insisting upon through communication as the only safe and civilized plan of railway carriage construction. Such through communication would do away with the present long halts to examine tickets. He concludes with hoping that when the government takes up railways as it has done telegraphs, the present idiotic arrangements will be done away with. At the present time, though the train-speed and service is moderately good only, our railway directors' conduct in matters of civilized detail is extremely bad; and, as usual, in fertility of resource, inventive adaptation, and utilitarian progress, they have fairly been outstripped by our American cousins. It is to be hoped that these frequent utterances of Mr. Davy will lead to some practical results.

And now I must conclude with the following which is told on one of our best known physicians: He was consulted by a member of the staff of a leading illustrated paper. Leaning back, with folded arms and a Napoleonic frown, he said:—"Well, there is not much the matter with you. A little change of air and scenery is all that is requisite."

As the patient had just come off an eight thousand mile sketching excursion, the advice seemed slightly off the target.

Reviews.

A Practical Manual of the Diseases of Children, with a Formulary.

By EDWARD ELLIS, M. D., late Senior Physician to the Victoria Hospital for Sick Children. Third edition. New York: William Wood and Co. 1879. 8vo., pp. 210.

This book seemed like a bargain. It is one of the dollar books published by the Woods of New York, in the so-called library of standard medical authors, but after scrutinizing its pages is likely to be cast aside by the purchaser with feelings of disappointment and disgust. Of no value whatever to the young student, it is if possible of less to the old practitioner. We read, for instance, on page 3:—"The normal temperature of the child, taken say under the arm-pit, is 88° to 98° F." An earnest student would make brilliant progress with the thermometer as a guide in disease, after such "standard" instruction, especially when told that "temperature is a better guide than the pulse in the diseases of young children, and should be used to correct its indications."

Again, on page 58:—"Intermittent fever occurs but rarely in children, and more rarely still in children under five years; a brief notice, therefore, will suffice." The notice is truly brief, for the whole question is discussed on a single page, treatment and all, and the important suggestion made that "treatment is best commenced by a free purge." All this is made the more ridiculous to the average doctor, when he turns to the preface and reads:—"I therefore trust that it (the book) may not be found less useful to the student and junior practitioner in England, America and Australasia, than its predecessors."

The author seems to be exceedingly liberal in giving credit to others; indeed, herein lies the chief merit of the work, for there is little of originality in it. From first to last, in tire-

some array, we read "Mr. Maunder recommends," "Cazeaux suggests," "Dr. Corson condemns," "Dr. Gumprecht says," "Dr. Dubrunfant points out," "Dr. Swanzy advocates," "Dr. Gee thinks," "Dr. Vogel mentions," "Dr. Naylor states," "Dr. Daun advocates," "Dr. Smith cites," "Dr. Foster records," "Dr. Ringer extols," "Dr. Fox attaches," "Dr. Jenner maintains," "Mr. Sartain considers," "Dr. Tanner publishes," "Dr. Duhring denies," "Dr. Tott has shown," "Dr. Condie speaks," "M. Girard thinks," "Dr. Scott observes," "Dr. Binz expresses," "Dr. West gives;" and thus reference after reference, to author after author, through page after page, until finally the writer, at page 160, strains to an end with a full measure of prolapsus ani, where we are seriously told "it is a good plan, in obstinate cases, to keep the child in bed, with its feet raised up on a pillow for a few weeks."

But fifty additional pages are required to make the book respectable in point of size, and these are made up with formulæ, stupid and stale, that have been handed down from generation to generation—sad relics of an age of polypharmacy. The veteran in practice has long since learned that, in a large proportion of the acute diseases which afflict the human family, the tendency is toward health and not toward death; and that usually a disturbing treatment does not hasten recovery, but frequently protracts it. He has also learned that the occasion is frequently presented when it becomes necessary to "do something" for the relief of suffering humanity; in other words, to practice his art. Strongly impressed with such ideas, he is ready to welcome a system of therapeutics that may seem rational and reasonable; he seeks after and treasures up everything likely to prove useful, and with equal facility promptly rejects what his judgment condemns.

Let us return now, and see to what kind of a therapeutical feast we are invited to by Dr. Ellis. We promise to be brief, and to leave the reader to make his own criticisms. Diseases are named and quotations follow:

Eczema—"A free purge of calomel and jalap will be useful at the outset." Convulsions—"If the child has been irritable, and has had 'inward fits,' the fontanelle being prominent, there is some abnormal condition of the nervous system, calomel will be required at once, a few leeches or a blister on the vertex." If they be due to uremia-poisoning after scarlatina, "twenty grains of jalap powder with a little scammony, to a child five years old, repeated every two or three hours." Hydrocephalus—"The best plan consists in quarter to half grain doses of calomel, with the inunction of one or two drachms of mercurial ointment into the shorn scalp daily. If no improvement in six or eight weeks, insert an issue in the neck." Pneumonia—"There is no objection to clearing out the bowels at the start with calomel." Gastric catarrh—"A purge of calomel and jalap is desirable at the commencement of treatment." Diarrhea—Lance the gums if tender; "small doses of calomel and opium, or logwood, kino and catechu, may be required." Peritonitis—"It is well to begin with calomel and Dover's powder every two hours. . . . Some recommend mercurial ointment, rubbed into the thighs, to hasten salivation; two drachms may be thus used." Inflammation—"Calomel one grain, nitre one grain, every three hours." Croup—"A dose of calomel may be required," or "tartar emetic one-eighth of a grain every fifteen minutes."

The following are copied to show want of care and accuracy:

℞ Alum, . . . 3 iii	℞ Paregoric, . . . min. xx
Syrup, . . . 3 i	Wine of ipecac, min. xx
Dose, . . . 3 ss	Syrup, . . . 3 ii
	Mucilage, ad. . 3 i
	Dose, . . . 3 ii

Again we read:—"Aconite I have recently employed to a rather large extent at the instance of a homœopathic friend."

But we are sick of the task; for there are hundreds of safer practitioners in the south and west, and scores who can write a more useful book. And yet this one comes to us all the way from Auckland, New Zealand, and stamped "standard."

J. M. K.

Health, and How to Promote it. By RICHARD MCSHERRY, M. D., Professor of Practice of Medicine, University of Maryland, etc. New York: D. Appleton and Co. 1879. 185 pp.

Prof. McSherry has presented a very pleasant and readable book on a theme, at this time receiving widespread attention from intelligent people throughout the civilized world. He treats of the sanitary affairs of the individual rather than that pertaining to the public; and estimating human life at eighty years, he divides into scores, and crediting Pythagoras with the suggestion, details the hygienic necessities of infancy, childhood and youth, which compass the first score; then of the young man, the second score; the man, the third, and the old man, the fourth score of the term of life.

Diet, clothing, exercise, education, labor, rest, and the surroundings for each period, are fully considered.

Original investigation is not claimed, but an intelligent and discreet collation of the teachings and conclusions of those who have investigated carefully and written wisely is given in chaste and expressive language, and in admirable sequence and connection.

The book is written for an intelligent public patronage, and not for professional instruction; and for this service, is of good design and well executed, except, perhaps, that there are too many untranslated Latin and French quotations and expressions—a condition that often mars and never improves a book on scientific subjects intended for popular enlightenment.

J. F. H.

Clinical Lectures on Diseases Peculiar to Women. By LOMBE ATHILL, M. D., University of Dublin, Master of the Rotunda Hospital, etc. Fifth edition. Revised and enlarged, with Illustrations. Philadelphia: Lindsay and Blakiston. 1879. 8vo., 335 pp.

We have spoken in high terms of previous editions of this little volume; we would gladly add to, rather than retract any of that praise.

Medical Chemistry—Including the Outlines of Organic and Physiological Chemistry, based in part upon Riche's *Manual de Chimie*. By C. GILBERT WHEELER, Professor of Chemistry in the University of Chicago. Philadelphia: Lindsay and Blakiston. 1879. 8vo., 410 pp.

The author of this book formerly lectured on chemistry in the Chicago Medical College, and at that time doubtless discovered how poorly prepared most medical students were to acquire anything but a very superficial idea of chemistry. He assumes in this work that the reader is versed in the general principles of modern chemistry; and while there are many things in the book which a student can comprehend without having studied inorganic chemistry, still there would be much as unintelligible to the majority of medical students as the Syriac characters. The first part of the work is devoted to organic chemistry; the second especially to physiological chemistry, in which the subjects of digestion, absorption, the analysis of the various fluids of the body, respiration and kindred subjects are treated of in a concise and interesting manner. The centigrade thermometer and the metric system are employed almost exclusively throughout the work, which departure is to be commended. The book is printed on heavy paper and neatly bound.

Index Medicus—A Monthly Classified Record of the Current Medical Literature of the World. Compiled under the supervision of Dr. J. S. BILLINGS, United States Army, and Dr. ROBERT FLETCHER, M. R. C. S., England. New York: F. Leypoldt. Price \$3 per annum.

The value of the present undertaking, in the publication of the *Index Medicus*, will be appreciated when it is stated that it indexes monthly every article in all the medical journals published in the world. When it is further stated that the *Index* is under the efficient management of Dr. J. S. Billings and Dr. Fletcher, no further guarantee is needed as to its worth.

Clinic of the Month.

TREATMENT OF WHOOPING COUGH BY ATROPIA.—Of this troublesome affection Arthur Wigglesworth, L. R. C. P., M. R. C. S., in the *Lancet*, April 12, says:—I commenced, then, over four years ago to treat all cases of whooping-cough solely with the solution of sulphate of atropia, from infants two months old to the adult. It required some little time to find out the average dose to begin with; but I now begin with 1-120th of a grain (or one minim in a drachm of water), in children from one to four years of age, either diminishing or increasing the dose as occasion dictates; and, except in very severe cases, only order it to be given once a day; but when the nightly paroxysms are very severe, I order half the dose to be repeated about an hour before bedtime.

The results that follow its administration may be summed up thus:—First, there is a steady diminution in the number of paroxysms; second, there is a diminution in the duration of the paroxysms; third, there is a change in the character of the “whoop,” as if the vocal cords were not so closely approximated. Further, if the atropine is withheld the beneficial effects derived from it subside.

Now, these results follow more or less speedily the administration of the remedy, and appear to depend upon the susceptibility of the patient to the action of atropia. In a few cases thirst may become a prominent symptom, which subsides, however, upon a diminution of the dose. In only one case has the sensation of “falling down” been experienced, and this disappeared with a reduction in quantity.

Of all drugs there are none that have such a peculiar and special effect upon the pneumogastric nerve as belladonna,

though it is by no means limited to that nerve. It is essentially a nervine sedative, and has a capacity for diminishing both sensibility and irritability when these are morbidly increased. Its primary effects are manifested upon the mouth and throat, producing thirst. A further action is upon the laryngeal muscles, rendering articulation imperfect, or preventing it altogether. So also upon the constrictors of the pharynx, that deglutition becomes difficult or impossible. These and other effects are produced more or less according to the amount taken. It is reasonable, then, to attribute the beneficial effects of atropia in whooping-cough chiefly to its effect upon the laryngeal branches of the pneumogastric nerve, diminishing the exalted sensibility and irritation which are known to exist, and which, by constant propagation to the medulla oblongata, increase in that body the capacity for reflex phenomena. But it is also probable that atropia has a very decided effect upon the medulla oblongata itself, rendering it less capable of exciting reflex action. Dr. Kroon's experiments led him to the conclusion that valerianate of atropia had a very special and direct effect upon it, diminishing its inherent capacity for reflex phenomena. The almost specific effect of belladonna in preventing nocturnal seminal emissions is also probably due to this action.

I think, then, the conclusion is justified that, by its action upon the pneumogastric and sympathetic nerves, and also upon the medulla oblongata, atropia relieves, and ultimately cures, the neurosis called whooping-cough; and that in those cases where, from idiosyncrasy or easily-excited sympathetic action, the intensity and severity of the reflex phenomena are greatest, the beneficial action of atropia will be more marked.

HYDRATE OF CHLORAL AND BROMIDE OF POTASH ENEMATA IN THE VOMITING OF PREGNANCY.—Recently having had a very favorable result from hydrate of chloral by enema, given in a case of gastritis where vomiting had occurred almost incessantly for three weeks, we gladly give further publicity to the

following note, in the American Journal of Obstetrics and Diseases of Women and Children, by D. B. Simmons, M. D., Chief Surgeon to Ken Hospital, Yokohama, Japan:

I published in the Medical Record of May 15, 1874, the history of four cases of severe vomiting during the first month of pregnancy, as relieved by the administration of chloral hydrate by the rectum, in portions of from twenty to thirty grains, dissolved in gum water. I call the attention of the profession again to this method of treating these often very distressing cases, because I am more and more convinced of its great value, from repeated trials of it since. The Japanese physicians, whom I have instructed in its use, also report very favorably on it. In fact, they confidently inform me that it rarely fails. Since the first few cases in which I advised its use, I have learned that the bromide of potash, in equal proportions with the chloral, adds to its efficacy. I have also learned that in some cases the remedy must be pushed to a moderate degree of narcotism in order to secure the desired result. The amount of each portion of the drugs and their frequency of administration depends, therefore, on individual susceptibility to its influence, and must be prescribed accordingly. I also advised its use in obstinate vomiting from other causes. Following this suggestion, it was administered by one of my colleagues, Dr. Stewart Eldridge, in a case of vomiting from local peritonitis which had resisted all other modes of treatment. The result was most satisfactory, indeed, almost magical. I stated, in the article referred to, that I had nowhere seen the use of chloral for this particular purpose mentioned. Neither have I been able to find it since. I shall therefore claim to have first used and recommended it, till some prior claim is established.

PREMATURE LABOR FROM KNOTTING OF THE UMBILICAL CORD. The above rare cause of premature labor is thus reported in the Obstetric Gazette for April, by Dr. A. F. Kinne:

I was called September 25, 1867, to attend upon Mrs. J. A. D., aged thirty-five, multipara, who had fallen unexpectedly

in labor at about the sixth month of gestation. She was a large and well-formed woman; pelvis ample; and, though rather fleshy, her labors had usually been short and easy. The cause of miscarriage was not obvious. It certainly was not in the father or mother, so far as we could see, or in any accident or circumstance within their knowledge. There was not much in the course of labor deserving comment. I noticed that the gush of the bursting bag of waters was more copious than should have been expected in a six months' case, and that was all. The fetus was of a fair size, and had not been badly nourished, and it was not asphyxiated. But it was extremely feeble. It breathed, cried faintly once, and in a short time was dead. But upon drawing down the umbilical cord, we found what seemed to have been the cause of the mischief. The cord was longer than usual, and about the middle of it, it was tied in a knot. This was to me a great curiosity. For I had never heard of such a thing then, and should hardly have deemed the accident a possible one. For a large loop must first be formed in the cord accidentally, and must remain until the fetus can accidentally sail through it—an amount of "ground and lofty tumbling," of which it is hard to see how the cramped and straitened gymnastics of intra-uterine life can admit. Upon presenting this specimen to Dr. Sager for the University Museum, however, he remarked that he did not quite think it unique, but was free to admit that he had never seen it before, and that it must be very rare. And he agreed with me, moreover, that this knot was the most probable cause of the premature labor. For it had evidently existed for some time—was drawn quite close; and, where pressure existed, ulceration had taken place, and great narrowing of the umbilical vessels had been produced.

Notes and Queries.

EIGHT HUNDRED MILES TO DINNER.—Marry, say you, but it was a long way to go. So it was, and yet I enjoyed it. As for the matter of that I enjoy a trip in any direction and anywhere, made after a winter of hard work—even if there is *but* a dinner at the far end of it. And so would you, and be the better and live the longer for it. But pray don't take my word for this. Try it. Start, for instance, as soon as you read this, for Atlanta. Don't wait to get your business affairs all in shape, or you'll never start; I can tell you that. Take no thought as to what you shall wear. You know what the Georgia costume is. Go just as you are, only be sure you do go to the meeting of the American Medical Association. Go and put your shoulder to the wheel of the car of Medical Education, and help lift it out of the old, old rut in which it has been running since you and I were boys. That educational matter is the one question which presses on you, and me, and all of us just now. And it is going to continue to press on us until something is done about it—until it is changed, until it is improved. Go and look into it; study it, hear about it, and if you don't care to speak to it, at least give those who are moving in the matter the encouragement of your presence. Something will be done concerning it. Why not have a hand in it? Who knows but you may succeed in cracking the nut which has proved too hard for others? The humblest of us may give it a lift; and don't you think we owe it to ourselves and to all other men, to try?

Then, when you've sojourned awhile among the warm-hearted and scantily-clad Georgians, come up to Kentucky. Come, as Watterson said to the President and his traveling companions, and take something with us. We will give you

welcome. Be here by the 14th of May. That is to be a great day in our history. A portion of a vast debt is to be paid on that occasion. Come and see how we do it. A statue of Ephraim McDowell, the Father of Ovariectomy, erected by the profession of Kentucky to that matchless man, is to be unveiled on that day with fitting ceremonies—if ceremonies can ever be made fitting for such an event. The illustrious Pennsylvanian will be there to recount the deeds of the mighty Kentuckian. And Dunlop and Emmet and Thomas will probably lend their presence. And possibly Mr. Wells, and Mr. Keith, and Mr. Bryant, and Mr. Thornton may drop in on us. They've been invited. Kossuth, when he first touched our soil, rose before a great multitude which had assembled to greet him, with this on his lips: "Kentuckians, I feel the morning air of your sympathies." Come to Danville, and you shall feel that same air during all your stay amongst us.

Did I hear you say, "What has all this to do with dinner?" Just this; I am going to return to that repast now. The French have another way of saying this; but it isn't fresh, and so let's skip it.

Some of our brethren in Philadelphia determined to celebrate, by a dinner, the fifty-first anniversary of Prof. Gross's entrance into the profession. The number of subscribers was limited to one hundred. Invitations were issued to a few of the friends of Dr. Gross, living outside Philadelphia. I was of the number. I left home Tuesday afternoon, and after an entirely uneventful ride, reached Philadelphia on Thursday morning. Seven o'clock that evening was appointed for the banquet. Rain set in early in the forenoon, and by evening had reached such proportions that it might fairly be termed, in the language of a Texan, a "root-soaker." I thought the water fell in a more than ordinarily quiet way, more soberly as it were, than usual; and when turning the corners, as it filled the gutters, it seemed to go more at right angles than I had been accustomed to observe elsewhere. Whether all this

be just as I put it, no one can gainsay that the "City of Brotherly Love" is a very wet place on a rainy day.

At the hour announced for the banquet, the guests began to assemble. Besides the very good men present who go to make up the Philadelphia faculty, there were the Flints, and Shradys and Wood and Sayre and Post and Bozeman, from New York, and Van Bibber and Smith from Baltimore, and Otis and Billings from Washington, and Silliman from Yale, and Parvin and other good men from other places. Professor Agnew took the chair at eight o'clock. A moment before he took away my appetite by telling me that I was expected to reply to a toast. A timely notice that one is expected to get on his legs, is allowable. No notice at all until you are called on, is even better; but to knock the epigastrium entirely out of a man, just as he takes his seat to fill the aching void left by a two days' journey, is a coarse cruelty which should be inflicted on no man. It turns bread to stone, and converts the meat into a serpent. Don't you remember the group of unhappy-looking people you've seen at banquets; the men who ate nothing and drank less, and with whom you couldn't, no matter what effort you made, keep up a talk, who wouldn't listen to you, and who gave you no opportunity of listening to them; the gloomy-looking chaps who seemed to wish they were at home in their little beds?—well, they are the men who are expected to speak, and who have been told so just as they took their seats.

On the right of the chairman sat the guest; to his right the elder Flint, for many years his colleague in the University of Louisville. To the left of the chairman sat Prof. Silliman, also a former colleague of Dr. Gross. The other visiting guests were placed here and there along the tables. At half past ten the speech-making was inaugurated by Dr. Agnew, who alluded in appropriate terms to the guest of the evening. In reply Dr. Gross spoke in a simple, modest way of his life; its early struggles and its lofty aims; of the mellow glow imparted to its evening by the fidelity of his friends and the love of his pupils. Shradys was fortunate enough to get a copy of

his remarks, and you can see them in the Medical Record. Read them, for they tell of a manly yet gentle life. Professor Rogers followed in his spirited, genial, witty, eloquent way, and concluded by toasting "our invited guests," and calling on your servant to reply. I was tremendously handicapped, you know; but nevertheless I struggled to my feet, in spite of the little Burgundy and terrapin I had consumed, and spoke about as follows:

Mr. Chairman: When the invitation came to unite in this offering, I was deeply touched. It revived memories of my student life when, as the pupil of your guest, I came before him for examination for the doctorate, now thirty-three years—a generation—ago. The teachings of that period have remained a part of my life. The method, the system which the great master observed as in his earnest way, he gradually unfolded to the minds of his hearers the grand truths which lie in the upper planes of surgery; the painstaking, conscientious care with which he infused interest into the dry details of his subject, his fiery zeal, his never-flagging industry, and, better than all this, the solemnity with which he declared that to be a truly great physician, it was essential to be at the same time a truly good man. All of these are as fresh to me this evening as when I made one of his hearers, now so long ago.

Mr. Chairman, I obeyed the summons to be here with alacrity. I came with pleasure. Nay, more, I came with feelings, akin, I fancy, to those which animate the pilgrim as he turns his footsteps toward the tomb of the Prophet. With fitting reverence, sir, I stand in this august presence. I come, sir, as the humble representative of a great people, the people of Kentucky, who send you greetings on this auspicious occasion. I come empowered by them to lay at the feet of your illustrious guest the homage of that renowned commonwealth. I come to wish him yet many years upon the earth, and to say that, though his name and fame have become a common heritage, Kentucky still claims them as peculiarly her own, since it was in her borders that he laid the foundation of a reputation which has not only irradiated this continent, but has penetrated wherever civilization is known, or surgery is cultivated as a science. I feel, Mr. Chairman, that it is an honor to be called on to speak on such an occasion and for such a people—a people who have given to statesmanship a Clay, a Lincoln, and a Breckinridge; to arms, a Johnson, a Preston, and a Buckner; to surgery, a McDowell and a Dudley. A goodly company! Stately names! Would you think me as exceeding the limits of good taste if I added, and chief among all these is that of him who bears the mark of our guild, Ephraim McDowell? For, sir, will not the labors of the statesman give way to the pitiless logic

of events, the voice of the orator grow fainter in the coming ages, and the deeds of the soldier eventually find place but in the library of the student of military campaigns, while the achievement of the village surgeon, like the widening waves of the inviolate sea, shall reach the uttermost shores of time, hailed of all civilizations as having lessened the suffering and lengthened the span of human life.

Again, would you think me very far wrong were I to couple the victorious issue of the late war and the operation of ovariectomy as in different fields, the two most stupendous events of modern times? Sir, both are to be credited to Kentuckians. Mr. Lincoln effected the one, and Dr. McDowell accomplished the other. Nor yet, in my opinion, do the two achievements admit of comparison. Powerful cabinets, far-seeing ministers, renowned captains, a daring and multitudinous soldiery, a rich, a steady, a united, and a persistent people contributed to the success of the former. Its glory was won amid the blare of trumpets, the groans of men, the shock of contending armies. The glory of the other belongs to but one man—is single and indivisible, was won amid the smiles of fair women, and by the cunning of a single hand which, unaided and alone, plucked victory from an enemy which, before McDowell's time, had defied all that was subtlest in art and repulsed every assault of science.

But, sir, I must fain have done. I feel that it is good to have been here. I shall return to my people and recount to them what I have seen and what heard, and report to them what I now offer in their name: To our guest, the illustrious son of Pennsylvania, the foster son of Kentucky, who, to the nimbus which ever encircles great deeds, has added the milk-white flower of a stainless life.

[It is usual in reporting speeches to intersperse "applause," "cheers," at intervals; but I have omitted all that. I thought it better to allow you to use these flavorings to suit taste, as the cook-books say.]

As I resumed my seat, Professor Gross rose, and with much emotion delivered this message:

"My illustrious pupil, carry my best respects back with you to the people of that State, and assure them of my undying attachment to the men and women, and most of all to their homes. After an absence of nearly a quarter of a century, my heart quickens at the recollection of my early home among them. May God preserve Kentucky and its warm-hearted people."

In another minute I was gone and thereby missed the other

toasts and speeches, and in an hour was on my way to Louisville. Perhaps you may think I cut it a *leetle* fat from the sirloin of Kentucky, and may be I did. But it is too late to better it now. What's writ is writ. All Kentuckians are somewhat weak on the beauty of our women, the stature of our men, the speed of our horses, the size of our shorthorns, and the purity of our Bourbon. Laugh at us if you will, but we can't help it. "It is Marks' way." So here's many happy returns of a like anniversary to you—and you—and *you*. As Elia said, "Do not we know one another? What need of ceremony among friends? We have all a touch of *that same*. You understand me." And though none of us can hope to rival the venerable and beloved surgeon of the "Jefferson," still each of us, in his own field and in his own way, may have communities to respect us while living, and lament us when dead. — said, a good while back, "*Odi Persieos!*" I don't. I like dinner.

MEETING OF AMERICAN MEDICAL EDITORS.—The annual meeting of the Association of American Medical Editors will be held at Atlanta, Ga., on Monday evening, May 5, 1879. The annual address will be delivered by the president, Dr. W. Brodie, of Detroit. All editors of medical journals and publications are entitled to membership in the Association, and are cordially invited to be present and participate in the meeting.

OBITUARY.—Dr. Isaac Hays, of Philadelphia, the well known physician, and senior editor of the American Journal of the Medical Sciences, died at his home April 13, 1879, after a brief illness, in his eighty-third year. Although an eminent practitioner, Dr. Hays's reputation has come principally from his connection with medical periodicals and his numerous contributions to learned societies. He was one of the charter members of the American Medical Association, its first treasurer, and the author of the Code of Ethics.

THE AMERICAN PRACTITIONER.

JUNE, 1879.

Certainly it is excellent discipline for an author to feel that he must say all that he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

Original Communications.

THE ELEMENTS OF SURGERY.*

BY JOHN CHIENE, M. D., F. R. C. S. E.

Surgeon to the Edinburgh Royal Infirmary, etc., etc.

LECTURE II.—Hemorrhage—Structure of the Vessels—Phenomena of Hemorrhage and its Natural Arrest—Causes of these Phenomena—Bleeding from an Injured Tissue—The Method of “Bloodless Surgery”—Artificial Arrest of Hemorrhage—Torsion—Ligatures—Plugging—Acupressure—Styptics—Caustics—Varieties of Hemorrhage—Primary Hemorrhage—Reactionary Hemorrhage—Secondary Hemorrhage—Effects of Severe Hemorrhage.

THE PROCESS OF REPAIR:—FIRST, IN A WOUNDED VESSEL; SECOND, IN THE INJURED TISSUES.

Hemorrhage.—With my remarks on the process of repair, I intend to associate very closely what I have to say on the subject of hemorrhage. The irritation which is accompanied by laceration of the tissues presents at first sight a much more complicated series of phenomena than that which I have been dwelling upon. The process of exudation does not go on alone. Each tissue in the body, with one or two exceptions, is practically a sponge traversed in all directions by minute

* In Mr. Chiene's first lecture, published in the AMERICAN PRACTITIONER for March, on page 160, the word “capped” should read “cupped,” and “capping” should read “cupping.”

canals filled with blood; and any break in the continuity of a vascular part is accompanied by rupture or wounding of some of these canals. Hence we have hemorrhage.

A short consideration of the process by which a wounded vessel is repaired will, in my opinion, be the best introduction to a consideration of the process of repair in the tissues generally. The wounded vessel heals by the formation and organization of blood clot. I shall try and show that the tissues are also repaired by the formation and organization of blood clot—a doctrine first taught by John Hunter.

There are, as you will know from your physiological studies, certain differences in the flow of blood from a wound, according as the blood comes from an artery, a capillary, or a vein. From an artery we have a succession of pulsatile jets of bright red blood; from a vein we have a steady flow of dark-colored blood; and from a capillary, or rather from capillaries, we have a slow oozing of blood, intermediate in color between venous and arterial blood.

Structure of the Vessels.—To understand what takes place when these vessels are cut across, recall to mind what you know of the anatomy of an artery, a vein, and a capillary. In an artery there may be recognized for our purpose three coats. We have lining the vessel, and in immediate contact with the blood, an epithelial coat modified in function by the presence of some elastic tissue. This is very fragile and easily torn, cut or destroyed. Secondly, we have the middle coat, much thicker and consisting of elastic tissue and non-striped muscular fiber—the muscular coat. The arrangement of the fibers is circular, and this must be particularly noted for two reasons, because it renders this coat of the artery weak to a force applied circularly, parallel to the direction of the fibers, as for example when we apply a ligature; and also because it produces a tendency to constriction of the cut end of the vessel. Thirdly, there is an outer coat—the elastic coat—consisting of oblique and longitudinal fibers. The distinguishing peculiarities of this coat also arise from the direction of the fibers. It is strong to a force applied circularly, as in the case

of a ligature, and there is a tendency in its fibers to retract when the vessel is cut across. I here show you a portion of the femoral artery, which will illustrate part of what I have said. It has been ligatured, and you will note that of the three coats the inner and middle have given way, while the outer still retains its continuity: the inner and middle coats—the former in consequence of its weakness, the latter in consequence of the circular direction of the fibers—have been divided with the ligature as with a knife. Besides these coats, properly so called, it is necessary to take account of the sheath of the vessel, consisting of areolar tissue, and *loosely* connected with the external coat. The loose connection of the sheath with the vessel allows an artery to retract within its sheath when it is cut across.

A vein differs in structure from an artery in two particulars: it is less muscular and it is less rigid. Hence, there is greater tendency to collapse, and less tendency to retraction and contraction, when the vessel is torn or cut across. But it is powerfully elastic, and will bear a ligature.

The capillary is practically the continuation of the internal epithelial coat of the artery, and tends to collapse when lacerated, being impelled to this besides by the elasticity of the surrounding tissues.

Phenomena of Hemorrhage and its Natural Arrest.—With these facts in mind, let us direct our attention to an open wound in which no large artery is cut. At first there is seen a general bleeding from the whole surface. It is an oozing from the capillaries and small arteries. This after a time ceases, and the flow is restricted to (in a small wound, perhaps) one or two spots, where we observe pulsatory jets of bright red blood. Gradually this jet becomes less in size; it issues forth with less force, and is thrown to a less distance, until at last the stream comes away drop by drop, and ultimately a clot forms arresting the flow altogether. This is the *natural arrest of hemorrhage*.

Causes of these Phenomena.—I have now to ask your attention to the causes of the foregoing phenomena. The great

thing needful in the matter, I may begin by saying, is the coagulation of the blood. There is a peculiar constitutional state found in some people to whom the preceding description does not apply in cases of bleeding. They are the subject of what is called the "hemorrhagic diathesis," or "hemophilia." In individuals subject to this condition, it is very difficult, sometimes impossible, to stop bleeding. The slightest wound, such as that caused by the drawing of a tooth, may cause persistent bleeding even to death, and pressure, styptics, cauteries, etc., are all tried in vain. As to the nature of this diathesis we are in ignorance. There can be no doubt that the thorough investigation of the subject would reveal some unknown conditions which would render cases of the hemorrhagic diathesis more amenable to treatment. Any light thrown on the true pathology of this peculiar condition would also add to our knowledge of the causes of the coagulation of the blood.

To return to the normal condition. In the case of any solution of continuity, you will observe that in the capillaries and arterioles there is collapse of the walls, and with the irritation at the lacerated or cut end of the vessels the coagulation of the blood and stoppage of the blood flow very soon supervenes. With the large arteries in which the three coats are developed (I do not speak of the very large arteries in which the rush of blood is so great as to prevent any natural arrest), the process is more complicated. The muscular fibers of the middle coat, and the elastic fibers of the outer coat, contract simultaneously. There is a constriction of the lumen or opening of the vessel, and there is retraction within the sheath which collapses and assists to make the opening for the blood flow still smaller. The time that the following changes take to occur, will depend on the size of the vessel and various other extraneous conditions. We notice, in the first place, a coagulum forming on the sides of the channel lined by the rough sheath of the vessel. This coagulum gradually increases in size until the channel is completely closed, and the bleeding is arrested temporarily. The coagulum then extends upward in the lumen of the cut vessel for a variable distance,

generally to the first branch; it can not extend further in a proximal direction, its formation being prevented by the current of blood constantly washing over the apex of the clot. The external clot acts as a temporary obstacle to the flow of blood. The internal clot, which is attached by its base to the external clot, protects the external clot from the force of the current, and allows those changes to take place in it which ultimately end in its organization; the result is the permanent closure of the wounded vessel.

The tissue which is now stopping the escape of the blood is a blood clot—recent, rudimentary, and by no means strong. At any moment the current may receive an access of strength, and sweep the temporary obstruction away. During the time necessary for the formation of the clot the individual will no doubt have lost blood, and a weakened circulation is the result. This favors the chances of the current being completely stopped; but the moment that this is attained, and no more blood escapes, the circulation will commence to recover its tone. In other words, the clot is formed under a lower pressure than that which follows shortly after the complete closure. Further changes then are needed, and in the clot there is formed a much stronger tissue than the mere fibrin of coagulated blood.

The series of events which take place, ending in the organization of a blood clot, have been carefully traced. The clot is formed in the sheath from which the vessel has retracted, and in the vessel itself as far as the first branch. It now becomes *adherent*, in whole or in part, to the walls of these structures. At the point where the external clot in the sheath joins the internal clot in the vessel, you will next observe an alteration in color. It assumes a *lighter hue*. This gradually extends throughout the whole mass. Microscopic examination reveals that it is due to two things. There is a disintegration and removal of the colored corpuscles: their function is gone, and they now form simply an impediment to the process of organization; therefore they are got rid of. But there is also a great increase in the cellular elements of the clot.

Migration of the white blood corpuscles takes place, and it is generally believed that in such situations there is rapid proliferation of these elements. The connective tissue corpuscles of the surrounding structures, more especially the endothelium of the inner coat, also proliferate and their products pass into the new tissue. The third step is *vascularization*. Blood vessels shoot into the clot. These are chiefly from the vasa vasorum, but it seems probable that there is direct communication established with the lumen of the vessel that has been occluded. This vascularity is only a temporary state of the clot, and but the means for establishing the ultimate condition of things. Gradual *contraction* is noted as the fourth stage in the process. This occurs after the tissue has become vascular; and, *pari passu* with the contraction, there is noted a decrease in the vascularity of the tissue, due to a disappearance of many of the new formed vessels. The intercellular substance in the clot becomes fibrous, the cell elements are less evident, perhaps they elongate and form fibers, and gradually the whole clot is transformed into fibrous tissue; and if we examine carefully the tissue which occupies the situation of the primary blood clot, we will only find in its place a fibrous cord, which gradually tapers off into the tissues. This is the last stage in the process. Such is the natural history of the permanent arrest of hemorrhage.

The preceding remarks have reference to an artery. The changes are slightly modified in the case of a vein. There is less tendency to contraction and retraction, but much greater to collapse; and the fact that there is no pulsating strong current also contributes to the ease with which coagulation takes place.

Such are the natural laws by which hemorrhage is conditioned, modified and suppressed; and you will, perhaps, bear with me if I speak shortly of one or two practical applications.

Why does a wound *in* an artery bleed so furiously? This is illustrated by the operation of arteriotomy. This is performed on the temporal artery, and the noteworthy feature is that the surgeon having carefully dissected through the skin

and fascia, down to the vessel, makes an oblique opening in it. The blood comes out with great force, and when enough has been drawn, the vessel is cut across, a pad put on the wound, and fixed in position with a bandage. When the first incision in the vessel is made, the contraction and retraction of the coats, if they take place at all, only assist in enlarging the opening; but when the artery is cut across, then the effects which have been already dwelt upon follow at both ends of the divided vessel; and these, assisted by a pad and bandage, are sufficient to stop the bleeding.

Bleeding from an Inflamed Tissue.—We may also explain in part why it is that in an inflamed and congested tissue we have such copious bleeding. No doubt an inflamed tissue contains more than the normal amount of blood; but besides that the contraction and retraction of the cut vessels do not readily take place, as they are more firmly united by inflammatory adhesions to the adjoining tissues; and this prevents the speedy stoppage, while the congestion affords a larger supply of blood. The artery can not retract and contract as in the healthy tissues.

The method of "Bloodless Surgery."—A third application of these principles is of great importance. Esmarch's system of "bloodless surgery" has been extensively employed of late years, both in this and other schools. It consists in the use of an elastic bandage to squeeze out all the blood from a limb that is to be amputated or operated upon, and in the substitution, in place of the tourniquet, of a strong piece of elastic tubing wound tightly round the limb to prevent the flow of blood into it during the operation. No doubt the term "bloodless"* is justly applicable to this method *during* the operation; but in its very completeness to my mind there is a serious defect. If the limb is emptied wholly of blood, there is no material for the formation of clots. The channels

* I do not desire here to discuss the question whether or not it is a right thing to leave the blood and take away the limb. It is apparently taken for granted by the admiration surgeons have for "bloodless surgery." To my mind it is by no means a settled question.

of the vessels are kept completely clear for the rush of blood when it comes; whereas if the limb is not entirely bloodless, we have, during the performance of the operation, a gentle trickling of blood with little or no pressure—the most favorable condition for the natural arrest to take place. The elastic tubing can not be slackened and again tightened; and if any of you, gentlemen, should adopt it in your practice, I hope you will have first considered that you will have to deal, not with the advantages and aids which you have in the hospital theater, but with the notorious poverty of resources of a private practice. Not only have you no assistance from the formation of blood clots; you have not even the usual minute streams to guide you to the smaller arteries before you unloose the tubing. So little can be done before the elastic tubing is taken off, and so much requires to be done immediately after it is taken off, that Prof. Esmarch, the inventor of the method, employs twenty-four pairs of forceps at one of the major operations. Can any one work with twenty-four pairs of forceps at a private operation, where perhaps he could not secure the services of a single qualified assistant? Let me ask you, then, to consider whether the conditions of hemorrhage admit of the employment of this method anywhere but in a hospital theater. It is, in my opinion, a better plan simply to raise the limb vertically for two or three minutes, before applying the tourniquet. This renders the limb sufficiently bloodless for all practical purposes. A small amount of blood in the vessels is useful, because blood is necessary in order that natural arrest of hemorrhage may occur. The trickle of blood guides the surgeon to the vessels which require ligation. The tourniquet can then be slackened and again tightened, more bleeding points will be observed, and after they are ligatured the tourniquet can be taken off. By this method less blood will be lost in the long run, and the practitioner will be enabled, by the use of these means, to perform with little professional aid the major operations in surgery.

Artificial Arrest of Hemorrhage.—We have treated of the arrest of hemorrhage in the capillaries, veins and small arteries. Take now the case in which a large artery has been cut. If you dared to stand by and watch with a scientific interest the appearances in this case, you would in a short time observe a decrease in the magnitude and force of the current. But mark the reason: an immense amount of blood has been already lost; there is no longer the same amount of blood flowing into the ventricles at the diastole; at the systole there is no longer, therefore, the same purchase gained by the muscular fibers in their contraction, and the propelling force of the heart's action is materially diminished. Besides this the total amount of blood in the body is rapidly growing smaller and smaller. In short the decrease in the magnitude and force of the current is associated with failing vital power, and the hemorrhage if unchecked will bring on fainting and death. It is useless to hope for a natural arrest by anything short of these two last issues: the waste is too great. The surgeon's active aid is required, and artificial means are necessary to stop the bleeding. The means at command are torsion, the ligature, plugging, acupressure, styptics, and the cautery. These artificial means take the place of the external clot in the natural current. They temporarily stop the flow of blood, and allow time for the permanent arrest to take place. It is needless to remark that the surgeon employs these devices to stop the bleeding from vessels of any size, as the process of natural arrest always involves the loss of a certain amount of blood.

(1.) *Torsion.*—This is a process by which, it has now been proved, we can stop the bleeding from any vessel, however large. In order that it may be efficacious, you must first, with your forceps, lay hold of the artery only—a matter of some difficulty in a small vessel. Then draw it forward clear from the surrounding tissues, and slowly twist it. A few turns only are necessary, and when let go it remains twisted, with the inner and middle coats ruptured, and the outer remaining entire. A clot forms in a short time, in which, by

the process of organization, fibrous tissue is developed, as already described when a vessel is closed by natural arrest.

(2.) *Ligature*.—This is the commonest mode, and, everything considered, is, where it can be employed, the best mode. As it is only by actual practice that you can really know how to apply a ligature, I shall not detain you with the minutiae. But I do wish to say a word with regard to the materials employed. The substance which has been most in favor with surgeons is silk. Now silk is practically a foreign body; and a foreign body present in the tissues causes a certain amount of irritation, which leads to ulceration and local death; and, as a matter of fact, the silk ligatures do generally come away in a small slough. There are cases in which this ligature is encapsuled with fibrous tissue, but they are rare. It is not difficult to see that a process of ulceration going on in a wound that ought to be healing, is fraught with a certain amount of danger, and the desire to avoid this danger has been the source of contrivances other than ligatures which have been hit upon. But Mr. Lister, reviving a practice of Sir Astley Cooper's, has introduced catgut as the most suitable material, and this combines in a remarkable way all the necessary qualities. Its strength is nearly equal to that of silk; and it does not, as silk does, form the nucleus for an ulcer. *It is an animal membrane, and can be absorbed in an animal tissue.* The process is slow enough to allow of the formation of a firm clot before absorption takes place. But from the first the catgut is not a foreign body; it is, if I may so speak, welcomed by the tissues amidst which it is placed, and friendly relations are established at once.

Sometimes it may not be easy to lay hold of the vessel in order to apply a ligature; the readiest method in such a case is to pass a curved needle, threaded with catgut, through the tissues under the vessel, and this ligature is tied, including the tissue, around the vessel along with the bleeding artery. This method is speedy and efficacious, and might with advantage be used more frequently. It has one great advantage that there is no chance of the ligature slipping; it is held in

position by the tissues included in its grasp. In an amputation of the thigh, I lately used it to secure all the bleeding points after tying the femoral artery and vein in the usual way. I was much pleased with the ease, speed and security with which the bleeding was checked, and from what I saw in that case I intend to use it *systematically* in operations. The needle may be threaded with a piece of catgut of considerable length; and in this way one needle will do for several vessels. In the case mentioned I required to use three needles, each with a thread eighteen inches long.*

(3.) *Plugging*.—This is adopted in those situations in which it is undesirable to make a large wound in order to render the ends of the vessels visible, as in the palm of the hand and sole of the foot. In these localities a large wound would form, when healed, a large cicatrix; and the weak tissue of which a cicatrix consists could not undergo the amount of pressure which is demanded of the skin in these parts of the body. Plugging is also employed in cases of hemorrhage in any of the passages in the body where it is impossible to gain direct access, as in the rectum and vagina. The principle of the application of a plug is that it should be dry. If wet it will form practically a poultice, and therefore a source of more bleeding. It should also if possible be wedge shaped, the apex of the wedge in contact with the bleeding point, so that advantage may be taken of this form to obtain firm pressure, as the application of a bandage used to bind down the plug. This latter remark applies chiefly to wounds in the palm and sole. The necessary pressure is afforded in cavities like the vagina and rectum, simply by the opposing walls.

(4.) *Acupressure*.—I only retain mention of this method in my lectures out of respect for the inventor; because the introduction of torsion, catgut ligatures, and antiseptic precautions, now secure every one of the advantages which were specially claimed for acupressure by the late Sir James Simpson.

* April 20, 1879. These words were written in January; at all my operations since that time the arteries have been tied in the way I mention. I have no reason to be dissatisfied with the result; it is quicker and simpler than the old plan.

(5.) *Styptics*.—These are used in severe capillary hemorrhage. How some of them act is not very clear, but one way is by producing coagulation. This is the effect of a favorite styptic in this school—a mixture of perchloride of iron and glycerine. I may mention here that ten or twenty drops of the liquid extract of ergot, injected subcutaneously into any part of the body, will sometimes stop bleeding. How it acts we do not know with certainty; it is said to cause contraction of the non-voluntary muscular fibers.

(6.) *Cauteries*.—These are useful in those cases in which it is desirable that there should be the smallest possible loss of blood, in which the ligature is not available, and in which also the application of the tourniquet or elastic tubing is not possible. Operations in any of the cavities of the body supply examples. The cautery may only be used to arrest the bleeding, or the tissues may be divided with the cautery. The instrument, in the latter case, sears the vessels as it passes through the tissues.

Varieties of Hemorrhage.—I have hitherto spoken of hemorrhage quite irrespective of the agencies which have brought it about. But variations in the causes and circumstances call for variations in the modes of treatment. There are three great varieties of hemorrhage—primary, reactionary, and secondary.

(1.) *Primary hemorrhage* may be either (a) from wounds received by accident, or (b) from wounds made in the performance of operations. The first class of occurrences are those which claim our most serious attention. If you are called to a case where there is severe bleeding, immediately place your finger upon the bleeding point and exercise compression. If you can not do that, then compress the artery between the wound and the heart. The flow of blood having been temporarily stopped, proceed to take measures for the proper permanent arrest. Remove all objects about the wound, such as articles of dress, etc., which in any case are probably soaked with blood, and will therefore, if allowed to remain, act as poultices. Even clots of blood will have this effect, and they too must be cleared away. The tourniquet having been ap-

plied, tie both ends of the divided artery at the bleeding point. The ligature below the bleeding point should never be omitted on account of the possible anastomosis bringing on bleeding in a short time. If you can not secure the artery at the wound, then tie it higher up between the heart and the solution of continuity. You will frequently be called to a case in which there has been severe bleeding, which has stopped before your arrival. If you can remain, you need do nothing; but if you require to leave the patient, then open up the wound, find the wounded artery and tie it. This is precautionary against reactionary hemorrhage.

In the treatment of wounds received at an operation, the circumstances of the case are all so defined and well known, that it is rather a question of the application of the simplest and commonest methods in the most expert manner than one in which we require the guidance of principles; and this is work for the class on operative surgery rather than for these lectures.

(2.) *Reactionary Hemorrhage*.—This comes on within two days after the binding up of the wound, during the reaction which occurs when the circulation regains its power. The causes are chiefly instances of omission of some small arteries in ligaturing, not unfrequently the neglect to secure *both* cut ends of a bleeding artery. The use of Esmarch's tubing has also been shown to be a great cause of reactionary hemorrhage. The force used in applying it paralyzes the contractile power of the vessels, and they do not contract naturally. As to the symptoms, these are not at first well marked. We have a stain on the dressing, small at first and increasing gradually. If there be much dressing, as there requires to be in the antiseptic system, then it may be very difficult indeed to detect this, and the first signs noticed sometimes are weakness and paleness from loss of blood. Whenever this hemorrhage is suspected the dressing is at once to be taken off, the wound opened up, and the mistake, if there has been any, remedied by tying the vessel. It will be found occasionally that clearing away the clot of blood that has formed is enough,

as the poulticing effect of this is sufficient to produce and keep up the hemorrhage.

(3.) *Secondary hemorrhage* comes on after the first week, and may take place at any time until the wound is healed. Anything which interferes with the organization of the clot is a cause. This interfering cause may be either a local one, as a putrefying state of the wound, or the special ulceration caused by silk ligatures, which may cause breaking down and destruction of the young growing tissue; or it may be a constitutional one, such as erysipelas or pyemia. The symptoms appear even more slowly and uncertainly than those of reactionary hemorrhage, but are otherwise the same, locally and constitutionally. The treatment consists in raising, if possible, the bleeding part, in order to take the blood-pressure off the wound as much as possible. The gentle application of a tourniquet may be used to effect this, and ice is used to induce contraction of the vessels at the part. I have seen very good results follow from the subcutaneous injection of ergot in the way I have already mentioned. If these means fail, you must break up all the new-formed adhesions, search for the bleeding point, and tie it. If the tissues are sloughing it may be impossible to tie the vessel in the usual manner, and then you must either use a threaded needle, include some of the surrounding tissue in your ligature, or try to sear the part with the cautery at a black heat. If you are still baffled, then ligature the artery of supply above the bleeding point.

Secondary hemorrhage is rarer now than it used to be. This is chiefly owing, I believe, to the fact that antiseptic precautions render the chances of ulceration much less, and the process of fibrillation in the blood clot goes on with much less hindrance.

Effects of Severe Hemorrhage.—Before leaving the subject of hemorrhage, let me interpolate a few remarks on the effects of severe hemorrhage. Now we see these only when a large artery is opened. Formerly, in the days of venesection, observation of the effects was much more frequent. The most marked result is the state called syncope. At the beginning

of each session, you have in the hospital wards abundant opportunities for taking note of the phenomena attendant on this condition, for a mild form of fainting is very common with some of you on your entrance upon your practical duties. The pulse becomes weak and compressible; the patient begins to yawn; pallor, muscular weakness and nausea quickly come on, followed by loss of vision, and he falls back in a "dead faint." The cause of all these symptoms is anemia of the brain, and on this fact is based the treatment; for it is generally sufficient to lay the patient in a horizontal position and lift up his legs, and this explains also why syncope so seldom takes place when the patient is lying. In those severe cases caused by actual loss of blood from the body, we may have two results: First, there may be reaction, the patient becomes flushed, the respiration hurried, the pulse jerky, and there is ringing in the ears. We do not interfere here; but if there is a wound we must watch for hemorrhage, for the heart is now regaining its power of contraction. Second, however, there are those cases in which the patient's rallying powers are very slight. The pulse is small and intermittent, the intense paleness continues, the patient becomes cold with clammy sweats and passes into a dozing condition, and in this state may die. Urgent treatment is necessary. Stimulants are to be applied internally in the form of brandy, etc., and externally as (*e. g.*) mustard and hot bottles. Tourniquets may be applied to the limbs in order to keep the blood in the axial centers. The last device is merely taking blood from a part where it is not urgently required to supply a part which does require it. And as a final resource, when not even the limbs of the patient can supply the necessary amount of blood, it may be taken from the body of another. And here I wish to say a word about transfusion.

The first and chief requisite of any instrument for transfusion is *simplicity*. A basin half filled with warm water at one hundred degrees of Fahrenheit, a second smaller basin to be placed within the first for holding the liquid to be transfused, a canula to be inserted into the vein of the patient, and a

syringe to hold eight or ten ounces of blood, are all that is necessary. The precautions of the operator are to be directed mainly against the chances of the entrance of air into the veins of the patient. A curious question has been raised as to the liquid that is to be injected. The first thought, of course, is that it ought to be blood simply as it comes from the body. But this in the process of transfusion necessarily comes into contact with foreign bodies, and acquires a tendency to clot, which of course impairs its efficiency. The introduction of clots into the circulation may give rise to dangerous complications. But the elements of fibrin are not required in this emergency, and Panum's experiments go to show that defibrinated blood (the fibrin being removed by smartly whipping up the blood as it is poured into the basin) supplies all that is necessary. But speculation has warrant in fact to enable it to go further. Is it the nutritive elements of the blood at all that is necessary here? Is not what is really wanted simply more force in the heart's contraction to enable it to send the blood to the head and vital organs? And will not this end be attained by the presence of any fluid in the heart on which the ventricles may gain a purchase, to enable them to contract? If any one has an opportunity of seeing a horse bled to death, and afterward opening the body, he will be struck with the large amount of blood still remaining in the body, more especially in the large veins. The animal would seem to have died, not of a want of blood, but of a stagnation of blood; an empty heart, empty arteries—nothing to drive the blood out of the veins into the heart. A heart without blood is as useless as a pump without water. These questions are raised by the circumstance that there have been instances in which the injection of such a substance as milk or salt and water acted beneficially in restoring vitality. The qualities which are necessary in the injected fluid then may be simply a temperature about 100° Fahr., a neutral action on the tissues, the fluid to be injected of a specific gravity equal to the blood, and (a most important point) no tendency to clot the blood. The whole question is still open to investigation.

This concludes what I have to say about hemorrhage.

PULMONARY TUBERCULOSIS.*

BY R. FRENCH STONE, M. D.

Phthisis pulmonalis, or, according to the popular acceptance *consumption*, is a term derived from the Greek word φθίσις (*phthisis*), which signifies to consume or waste away, and denotes certain affections of the lungs involving in general more or less destruction of these organs, together with progressive emaciation, and in a vast number of cases ending fatally. Tuberculous and tubercular disease of the lungs, and pulmonary tuberculosis, are synonyms having reference to certain characteristic morbid products within the lungs. A few other designations which late writers have proposed are such as tuberculous pneumonia, chronic lobular pneumonia, catarrhal and cheesy pneumonia. Such terms are used to denote an inflammatory condition of the lungs, and the different words prefixed are intended to distinguish the disease from other forms of pneumonic inflammation.

Pulmonary consumption has existed in the human family as far back as historical knowledge extends. Whether it has increased or diminished is unknown, but perhaps has steadily increased, at least up to the present century, when it has been held somewhat in check by a more correct knowledge of its pathology and a better observance of the laws of hygiene by the people of the present time, which undoubtedly exerts a controlling influence over the spread of the disease in question. But even now it is stated, upon the highest medical authority, that more than *one-fourth* of all deaths are due to this disease alone. The importance of this disease is evident when its fatality and prevalence is considered. It spares no age nor sex or condition of life. It is identified with that dread scourge whose ravages are expressed by an ancient poet, when he says:

“With equal pace impartial fate
Knocks at the palace and cottage-gate.”

* Read before the Putnam County (Ind.) Medical Society, April 8, 1879.

Phthisis pulmonalis exists, to a greater or less extent, in almost every portion of the inhabited globe; and when an estimate is made of the mortality of different diseases, one year with another the world over, even counting those great epidemics which sometimes prevail, we find that its devastations have far surpassed that of any other disease. Statistics inform us that the population of Great Britain, France, Germany and Russia numbers less than 200,000,000, and that out of this population the annual deaths from this disease are about 870,000; and that of the people inhabiting the entire globe at least 3,000,000 die each year from phthisis. Coming to our own land we find, according to the last census of the United States, that the total mortality from all diseases for the year ending May 31, 1870, was 492,263; and that the number of deaths from phthisis pulmonalis was 69,896—a far greater mortality than from any other disease, as for every seven deaths we have one in consequence of this terrible malady. We have ascertained, from the medical history of the late rebellion, that the disease under consideration stood fourth in the cause of mortality in the army during the war, and that several thousand more soldiers were discharged upon surgeons' certificates of disability on account of phthisis, than from any other disease. But the latest statistics we have is the mortuary experience of life insurance companies in this country, which shows the loss from consumption to be over nineteen per cent., or about one death in five.

We find that the symptoms of phthisis pulmonalis were clearly described by the physicians of antiquity, especially by Hippocrates; but that tubercles as we understand them were unknown to the ancients, and that even Galen and Rhazes recognized only tuberculous suppurations and ulcerations of the lungs, and that patients died from it only because the lungs could not be treated like external parts by means of the knife or cautery. Sylvius was the first to ascertain the existence of nodes from the softening of which cavities were formed. Many conflicting theories have been advanced in regard to the nature and different forms of phthisis by such writers as Bayle, Laënnec, Andral, Louis, and Rokitansky.

About thirty years ago, Reinhardt established the fact that many substances hitherto regarded as tubercle were identical with the products of inflammation, and that tubercle corpuscles may originate from pus cells. Virchow limited the term tubercle solely to *miliary tubercle*, which he still regarded as a *neoplasm*; and what had previously been called tuberculous matter he now called *caseous matter*, and tuberculization was caseation. But according to Ruehle, the miliary tubercle of Bayle plays only a subordinate part in pulmonary consumption, as he regards it as an *accidental secondary product*; and when it forms the only anatomical lesion we have to deal with, it is an acute infectious disease—the acute miliary tuberculosis which does not belong to phthisis proper. “There is,” says this author, “probably no chronic miliary tuberculosis, in the old sense of the term.” Ruehle does not regard acute miliary tuberculosis as a variety of acute pulmonary consumption, but as an infectious disease which may occur whenever an opportunity arises for the absorption by the vessels of caseous matter.

We shall not occupy time by giving the different opinions of the old authors, in regard to the nature and origin of tubercle; but accept the theory advanced by the great German pathologist Rindfleisch, whose recent researches with the microscope have made clear, in a few years of patient investigation, that which the observations of other eminent men have left veiled in doubt and obscurity for centuries. Rindfleisch goes farther than Ruehle (also a modern author), and regards ordinary tuberculosis as an infectious disease, and believes in the existence of a tuberculous virus which, like syphilis, can be transmitted from one person to another, and demonstrates this by inoculating certain animals, as rabbits, guinea-pigs, etc. But he believes that idiopathic tuberculosis occurs almost exclusively in a special class of persons—the *scrofulous*. It is the characteristic nature of the constitutional disease called “*scrofula*,” that all the inflammatory processes which occur in each individual run a peculiar course; whilst in a normal individual an inflammatory infiltration of any portion of connective tissue either undergoes resolution or suppuration within a moderate space of time, in scrofulous persons

the same inflammation shows a well-marked tendency to be protracted. The infiltration disappears very gradually as it remains stationary and undergoes regressive metamorphosis of a cheesy character. Virchow first called attention to the predominant cellular character of the scrofulous exudation, to its hyperplastic nature, and to the low vitality of its cells which compose it. In addition to this, Rindfleisch has ascertained that fresh scrofulous exudations contain relatively large cells with glistening protoplasm, and a nucleus in the act of segmenting or containing a double nucleus. And he is of the impression that the emigrating white blood corpuscles—(*wandering cells of Recklinghausen*)—which, in normal individuals, pass from the blood-vessels of the inflamed tract to some adjoining surface, or to the lymphatic vessels and glands, or become collected into abscesses, in scrofulous persons have a tendency to grow larger on their way through the connective tissue, swell up by the absorption of albuminous substances, and in this very swelling die and slowly degenerate.

Now, the consequences of this peculiar anomaly of vegetation are felt in all the inflammations of scrofulous persons, less in the superficial catarrhs of the skin and mucous membrane than in the deeper parenchymatous inflammations of the glands and viscera. In scrofulous catarrh there is not only an abundance of cells, but a thick and quickly drying character of the secretions. The exudation bodies lie so thickly together that they form a layer touching the epithelium, and there is an infiltration with round cells extending deeply into the submucous tissue, and until these cells have entirely disappeared the mucous membrane is not restored to a perfectly normal condition. Many of these cells wander gradually to the free surface and are cast off; others pass into the commencement of the lymphatic vessels, while others undergo a granular fatty degeneration. Their detritus is partly mingled with the lymph which flows from the inflamed tract into the neighboring lymphatic glands, and partly forms an element in the secretions in which fine granules possessed of molecular movements are constantly found. Rindfleisch is inclined to the opinion that the formation and transportation of the tuber-

cular poison is effected by the formation and transportation of this detritus.

The deeper parenchymatous inflammations which take on the scrofulous character are much more characteristic. They begin always in the connective tissue of glands and of other compact organs; and unlike the non-scrofulous inflammations, their only termination is a cellular infiltration of connective tissue, and in consequence of this infiltration the connective tissue is converted into a dense, indurated, grayish, half-translucent mass, which constitutes the acme of the process. On account of this dense infiltration the blood vessels become obstructed, and then *necrobiosis* takes place; at least there is as yet no proof that scrofulous infiltration is capable of any changes except that of degeneration.

Owing to the proliferation and impaction of cells, the first step in the necrotic process begins as a cheesy transformation. After the cheesy degeneration may follow calcification or softening. This same kind of inflammation plays a similar and important part in pulmonary phthisis, only in the lungs the process is complicated by the accumulation of inflammatory products within the air cells. The alveolar walls are swollen by the cellular infiltration, the alveolar cavities become smaller and smaller until they become obliterated, and in place of lung tissue nothing is seen but a homogeneous mass of proliferated round cells and connective tissue—non-vascular because no infection penetrates the homogeneous nodules, showing that the infiltration has led to no new growths and organization, but a permanent thickening of the infiltrated parenchyma, which is necessarily followed by cheesy degeneration. By a chemical metamorphosis the final degeneration of scrofulous infiltration is effected, which converts it into fat globules, albuminous granules, and a quantity of soluble substances which can not be seen; all these substances, however, must necessarily be absorbed. “Now, when we consider that scrofulous persons are especially predisposed to tuberculosis; that tuberculosis hardly ever occurs except in scrofulous persons; that tuberculous phthisis is only a combination of scrofulous inflam-

mation and tubercles, and that in scrofulous persons an inflammation brings with it the risk of tuberculosis, we here see the reason why that, in certain individuals as in certain animals, inflammations run a peculiar course." The cheesy infiltration and suppuration of mucous membrane elaborates a poison which when *absorbed produces tubercles*, and this constitutes the relationship between the two diseases. The tubercular poison in most cases is thus manufactured by the patient himself, and can not find a foothold in a system free from the *scrofulous constitution*. We can not, therefore, regard the disease purely infectious in the ordinary sense of the term, as it has never yet been demonstrated that this poison can be transmitted to perfectly healthy persons.

On the other hand, pulmonary phthisis is almost always a general disease. There is first scrofula, and then the cachexia from the absorption of scrofulous products. The intensity of this cachexia is only partially revealed by the formation of miliary tubercles. Rindfleisch makes his meaning more clear by the following illustrations: He says if a scrofulous child is struck by some accident on the elbow, the joint may become inflamed; such an arthritis, accompanied by pain and congestion, may last for several months, then take on a fungous character and the cavity of the joint become filled with pus. The cells of this purulent secretion degenerate, their detritus remains in contact with the diseased synovial membrane, is absorbed, and there results from this absorption local and general miliary tuberculosis.

Again, if in some other child from bad food a catarrhal inflammation of the small intestine is excited, the adenoid tissue of the mucous membrane becomes infiltrated with cells; these cells break down and are absorbed by the lymphatic vessels, then are produced miliary tubercles along the course of the lymphatics up to the mesenteric glands, and even beyond them, so that there is general tuberculosis. In the same way a scrofulous ophthalmia, an impetigo, or a scrofulous ozena, may lead to tuberculosis of the cervical lymphatic glands, and then of the entire body. A catarrh of the larynx,

due to cold, may give rise to a scrofulous infiltration of the vocal cords or the folds of the glottis. The cells of this infiltration break down, and their débris excite, on account of the unfavorable condition for absorption, an eruption of miliary tubercles in the vocal cords, followed by tubercular ulceration. It is an old axiom, but one not fully realized, that pulmonary phthisis usually begins with a neglected catarrhal bronchitis. Many patients complain, at first, only of an irritable cough that remains after a catarrhal bronchitis. The attending physician usually finds at this time catarrh of the apex of one or both lungs. At the same time the anatomist would probably find a combination of two conditions—a circumscribed catarrh of the small bronchi at the apex, and eruption of miliary tubercles in the acini belonging to these bronchi. Rindfleisch holds to the belief *that the catarrh precedes the tubercular deposit*, which makes its appearance at the point where the smallest bronchioles become continuous with the acini of the lungs, on account of the angles and projections of this locality, thus affording minute foci for scrofulous infiltration which forms the circumscribed white nodules called *tubercle granula*, or the primary tubercle of the lungs. The reason why the tubercular process usually begins in the apices of the lungs, is on account of the catarrhal secretions of scrofulous persons being less easily removed from the apices, and the secretions thus remaining have more time to inoculate the surrounding tissues. Rindfleisch, in opposition to the views of Virchow, says that scrofulous lymphatic glands are always tubercular glands; that the grayish parenchyma, before it undergoes cheesy degeneration, is found not only to contain giant cells, but is studded with a considerable number of veritable tubercles.

To recapitulate, then, according to the views of this distinguished author: tuberculosis in man depends in general upon scrofula. Concerning the nature of scrofula we are still very ignorant. The late surgeon Brainard believed it to be modified syphilis, and asserted in his clinical lectures that this definition of scrofula was no stigma to those who had the disease;

because when we undertake to count up our ancestry, both paternal and maternal, for five or six generations, we find them to number several hundred, and it would not be at all unlikely that some one of this ancestry had contracted syphilis. Taking this view of the case, we may say that while scrofula is the father of phthisis, that syphilis is its grandfather—the parentage of each disease being represented by several generations.

Rindfleisch does not, however, appear to take this view of the question; but contents himself by saying that the fundamental ingredient of scrofula seems to be a misproportion between the volume of the blood and the weight of the body, and with this condition exists an abnormality of the entire vegetation, which is especially evident in the course of any inflammatory process which may arise. He thinks scrofula may be the result of bad food, damp climate, or at least damp dwellings, with lack of fresh air and sunlight, or of exhausting losses of blood; *but it is eminently hereditary*. It is almost the exception, he says, to find a child of scrofulous parents without some taint of the disease. Hereditary scrofula usually makes its appearance at two periods of life—in early youth before the seventh year, and again after puberty between the twentieth and thirtieth year; and it is between these periods of life that the best opportunity is afforded by care and treatment to obliterate the traces of previous scrofulous lesions, and to prepare against the invasion of future ones.

Pulmonary consumption is necessarily a chronic disease; even the acute form known as phthisis florida generally requires several months to run its course, though Flint cites some cases of only a few weeks' duration. But acute miliary tuberculosis is so different in its general nature from all forms of consumption that it should occupy a position by itself, and is so classed by Ruehle and other high authorities. The early symptoms of ordinary phthisis are generally so indefinite that even the most careful examination at the outset will fail to demonstrate the existence of the disease, and the diagnosis is

based rather upon apprehension than knowledge. Usually we have two classes of cases to deal with. In one class, for some time before the beginning of a single symptom, indications of a general derangement of nutrition are observed, such as pallor, weakness, loss of appetite, and perhaps also more or less fever, lasting for weeks or months before cough or hemoptysis occurs. In the other class, the usual symptoms of the incipient stage of the disease make their appearance, and continue without any evidence of other disturbance of health, and without attracting much attention until at last muscular weakness, pallor, emaciation and fever set in, with night-sweats, which may be the first symptom attracting the attention of the patient. Among latent incipient symptoms must be included a special excitability of the heart; and, if the patient be anemic, there may be continuous acceleration of pulse, without any evidence of increased temperature. We are generally, however, compelled to date the commencement of the disease from a cough which arises without obvious cause; in some cases hemoptysis may occur first, followed immediately or after considerable interval by cough, which when once established continues as a rule to the end of the disease.

If a person with the foregoing symptoms have large eyes, with a transparent sclerotic and long eyelids, a pale face which blushes readily, thin, slender hands with incurvated nails, and a sharply defined red line at the edge of the gums opposite the incisor and canine teeth, additional evidence is afforded at sight of the existence of phthisis. Upon removal of the clothing, one is struck with the leanness of the chest, the hollowness of the subclavicular depression, and of the supra and infra spinatous fossæ, the prominence of the scapula, the diminished antero-posterior diameter of the thorax, the width of the intercostal spaces, and the abdominal character of the respiratory movements. If the patient voluntarily take deep breaths, the upper walls of the chest, upon one side particularly and perhaps upon both, will be seen to move very slightly, while the number of respirations are increased.

The examination of the upper part of the lungs reveals already upon one side *prolonged harsh expirations*. If the patient coughs, a few crackling râles are heard, which are not observed in any other part of the chest. The temperature of the patient is normal or subnormal in the morning; but during the afternoon or evening it may rise to 100° in the axilla, while the cheeks may become flushed and the hands hot. After the lapse of a few months the cough becomes stronger; the expectoration will now consist of small yellowish masses, containing white streaks and granules of more solid consistence, which gradually sink in water. In most cases, upon a microscopical examination of the sputa, distinct elastic fibers are revealed. The appetite becomes more impaired, the pulse accelerated, while fever sets in even during the morning hours, with slight perspirations at night; the crackling râles in the upper lobe of the affected lung become more abundant, while the expiratory murmur becomes sharply bronchial and the dullness unmistakable.

But after leading an outdoor life, with suitable diet, most of these symptoms may grow better. The dullness and bronchial breathing, however, still remain. The hopes of the friends may revive, while those of the patient have never been lost. But disappointment often returns, for in the autumn the cough and expectoration again increase. Stabbing pains occur in the affected side; the dullness becomes more extensive, and is now detected in the apices of both lungs. The bronchial breathing gradually acquires an amphoric quality, while the percussion sound becomes more clear again, and somewhat tympanitic. The fever also reappears, and from this time keeps up, the thermometer ranging from 101° to 103° F.; but in the morning the temperature may not be above the normal. The emaciation gradually becomes extreme; the patient's strength greatly reduced, though the appetite may be unimpaired. The expectoration increases, and contains solid, conglobate, irregular, spherical sputa, which sink to the bottom of water, or else may present a more fluid or entirely purulent character. The night-sweats become more profuse.

The alvine evacuations as a rule remain normal, though obstinate diarrhea may occur. The patient in the meantime, notwithstanding these alarming symptoms, may continue remarkably cheerful, and look forward to complete recovery in the spring; but instead of this he sinks into a state of extreme exhaustion, and death generally puts a period to his existence, at a time usually ranging from six months to two years from the beginning of his disease.

There are, however, in the course of nearly all cases of phthisis *periods of arrest*. These periods may not only last for months, but even years; and in some cases, especially if the disease be confined to the lungs, the morbid process may terminate by cicatrization, even after the formation of cavities, as has been repeatedly demonstrated at autopsies. We have often witnessed this fact in post mortem examinations during the late rebellion, the patients having died of other diseases. But more extensive evidence will be given when we speak of the prognosis of phthisis.

Cases of pulmonary consumption, like the one previously described, are typical of the simplest form of the disease; but by no means represent the most frequent, as the symptoms and course of the affection are modified in various ways by the usual extension of the morbid process to other organs, or by complications most frequently involving the larynx or intestines, manifested chiefly in the former by hoarseness, aphonia and difficult deglutition. The intestinal affection generally makes its first appearance during the latter stage of pulmonary disease, the lesions being just above the ileo-cæcal valve, manifested by slight pain upon pressure in the region of the cæcum, and diarrhea, the operations amounting sometimes to six or eight daily, mixed with traces of blood and yellow specks of pus. In giving a brief analysis of the individual symptoms of phthisis pulmonalis, we will say that as a rule the cough and expectoration are constant symptoms, and are in proportion to the extensiveness of the pulmonary lesions, and during these periods of arrest of the disease they likewise subside with the amelioration of other symptoms. This is

not however invariably the case, as the nearer the tuberculous process is to the larynx, the more annoying the cough; also the expectoration may be increased somewhat as the bronchial mucous membrane is implicated, while more extensive lesions of the parenchymatous structure of the lungs give rise to less expectoration. It is well known that young persons, women and other consumptives of excitable temperament, have relatively the most cough, and at times the cough is increased independent of any aggravation of the disease; while, on the other hand, Professor Flint says there are some cases of phthisis in which there is *no cough*, but such cases are rare.

BAINBRIDGE, IND.

(To be continued)

YELLOW FEVER.

BY EDMUND McALLISTER, M. D.

This disease, prevailing from time to time, and still producing the same mortuary record among the rich as well as poor, may be termed the *opprobrium medicorum*; therefore, I shall deviate from some received opinions, and give my own experience and observations acquired in three epidemics.

Yellow fever is a disease of one febrile paroxysm, terminating in three or four days in death or convalescence, attended with great heat of the surface, labored circulation, pains in various parts of the body with a constant tendency to extreme irritation of the nervous system, also a hemorrhagic tendency which frequently culminates in black vomit. It is a blood poison, the blood being apparently unfitted for healthful function. Dr. Bennet Dowler made post mortem examinations in one hundred cases dead from yellow fever, in Charity Hospital, New Orleans; and in regard to the pathology of the disease he says, that in the one hundred cases in two or three only could he find sufficient disease in any part or organ to

produce death, the solids all being sound, but "black vomit" was found in the stomach and bowels, and hemorrhagic effusions in the serous and muscular tissues.

The indications for treatment in this disease would seem to be cooling and depletory in character, and to control excessive excitement. The patient should be allowed plenty of fresh air, for the fear of debility in this disease has caused much mischief, a disease in which the brain and nervous system are at their utmost tension. Treat a case of yellow fever vigorously with tonics and stimulants and the symptoms will constantly become more alarming; for I do not believe, even in convalescence, that these remedies are well borne. This is not a disease of debility, and the shortness of its course and observation prove that the muscular strength remains almost unimpaired to the last.

It is important to decide as to whether the case is of a high or low grade of disease. The treatment advocated in this paper is mainly for the high grades of disease, but is applicable in a modified form to any type.

Commence the treatment by the application of cold water to the surface, in the form of a shower douche, sponge or plunge bath, or wrap the patient in wet blankets, always watching the pulse and temperature carefully; and so soon as both are sufficiently reduced cease the application, put the patient in bed with or without drying. If the patient is cold, apply heat to the feet and limbs. If perspiration occur, it may be aided by giving some warm tea, and if the fever recur the above treatment should be repeated.

Simultaneously with the use of the bath, give fifteen or twenty grains of calomel, combined with ten grains of jalap. I prefer this cathartic, as it corrects the secretions without irritation. After this a compound cathartic pill may be given *pro re nata*, taking care to irritate the bowels as little as possible. Nitrate of potash in five grain doses, largely diluted in water, should be given every few hours throughout the disease, unless it irritates the bowels. I use this remedy for its antistimulant, diuretic, and refrigerant effect.

If the above treatment fail, then bleed from the arm in the usual way; take off the bandage and let the blood flow continuously until a change for the better occurs. There is scarcely any danger from the bleeding, as nature will protect herself as in other slow hemorrhages; but the flow of blood should be stopped if necessary. This mode of bleeding is not attended with violent reaction, and does not reduce the strength as some forms of hemorrhage do. This manner of extracting blood acts as a sedative to the nervous system and brain, and brings into action the absorbent system, which gives an opportunity of administering nutritious drinks, lemon water, simple water, etc., which things have an alterative tendency on the fluid mass, and assist in correcting the poison. The induced hemorrhage may also have a tendency to prevent fatal hemorrhage, of which "black vomit" is the chief in yellow fever. This mode of bleeding gives nature a chance to eliminate offensive matter from the system, and ordinarily after the first or second bleeding there is decided improvement.

Morphia and hyoscyamus both act promptly in procuring rest. Local remedies are of little use, if the general symptoms are controlled. Ice and iced-water should be allowed *ad libitum*.

When yellow fever continues three or four days without improvement, there ensues a condition without fever called a calm, which the inexperienced would consider favorable; but this is a critical condition—a momentary cessation of hostilities, with apparent but not real debility. Tonics and stimulants in this condition only hasten a fatal termination, and a modification of the practice alluded to above gives the best prognosis. These delusive conditions are sometimes accompanied from the first with copious perspiration; and if the perspiration is not soon attended with improvement of the symptoms, it forebodes danger. It will not do in yellow fever to wait and see what the fever will do; it must be checked immediately, or the case is lost.

Sometimes in the early stages of the disease the pulse is very slow, but full; this does not conflict with the practice

prescribed, but moderate stimulation can now be used. When the patient is too hot, cool him; when too cool, warm him. Examine his extremities often, and maintain the proper temperature. Always endeavor to produce dark consistent stools from the bowels, as this will relieve the patient much.

Why yellow fever is contagious at one time and not at another, I do not know; but that it was as contagious here last year as measles or small-pox, is beyond a doubt. Persons exposed in the infected district would go fifteen miles into the country to an elevated pine-wood region, and there be stricken down with the fever; and all persons, almost without exception, coming in contact with the sick were attacked, the same type of disease prevailing as was prevalent in the infected district.

The doctrine that yellow fever can be carried about on the person and wearing apparel of the well, and thus communicated, is I think an error fraught with mischief to the well and sick. The filth theory of yellow fever is very much weakened by circumstances of time and place, and the atomic theory of the "importationists," on account of the difficulty of tracing any tangible connection, has to be taken with a great degree of allowance.

I believe that yellow fever always begins with mild sporadic cases, continuing for weeks or months previous to becoming epidemic and virulent.

PORT GIBSON, MISS.

SUCCESSFUL CASE OF LARYNGO-TRACHEOTOMY.

BY W. M. FUQUA, M. D.

On February 3, 1879, I was called in consultation by Dr. J. P. Peyton, of this county, to see a negro child, male, fourteen months old, a fat chubby fellow, who, in toying with a few grains of corn on the floor, and getting one in his mouth

and being induced to laugh, suddenly drew it into his wind-pipe. The accident occurred late in the evening, and it was on the following day at noon I saw him. A mere inspection of the child would have satisfied any one as to the nature of the trouble, so palpably plain were the symptoms. By placing the index finger on the trachea, and slightly depressing the head of the child so as to cause movement of the foreign body, violent paroxysms of coughing ensued, causing the grain of corn to be forcibly propelled against the walls of the trachea. Asphyxia being imminent, it was determined to open the trachea at once. The little patient's neck being so short, thick and fat, I feared I should have to pierce the crico-thyroid membrane, and sever the rings of the trachea also. This was accordingly done, and a branch of the thyroid artery was divided, which was immediately ligated. The operation was performed with little difficulty, save the hemorrhage, which was produced by laceration of some of the vessels with the handle of the scalpel. Just as the trachea was pierced, and the opening made sufficiently large, the child began to vomit, and for a moment it seemed as though it would die from asphyxia. Turning his head quickly over the table, and elevating the body to prevent the blood from flowing into the trachea, he soon breathed freely and easily. In a few minutes he had recovered from the anesthesia.

We do not know whether the grain of corn was expelled through the wound, or whether it was cast out through the natural entrance, during the violent paroxysms of strangulation and vomiting. Suffice it to say that the little fellow had no further respiratory trouble. The wound, one and a quarter inches long, was closed with sutures and adhesive strip, and supported by a light bandage. On the seventh day after the operation, Dr. Peyton informs me that the boy had entirely recovered, and I accord much of the success of this case to his judicious after-treatment.

FOREIGN CORRESPONDENCE—OUR LONDON LETTER.

LONDON, May 15, 1879.

MY DEAR YANDELL: Last evening was held the annual *conversazione* of the Medical Society, where we missed your genial presence. The only representative of the great republic present was Marion Sims. I remembered distinctly the fun and the stories we had last year. There was a good gathering, and the oration was delivered by Walter Coulson on Diseases of the Genito-Urinary Organs.

In my last letter I ventured to hope that Mr. Jonathan Hutchinson would say something about the effects of syphilis upon the teeth in the line of imitation, but he has disappointed me. Many of us who recognize distinctly the well-marked syphilitic teeth, are curious as to what are the effects of syphilis upon naturally well-shaped teeth—in other words, the finer shades of syphilitic teeth. The fourth denticle being amissing will not alone suffice for a diagnosis; and if syphilis alone produces these imperfections, then many of my friends have been less discreet than they got credit for in their youth; and I am afraid we can scarcely yet calculate a man's early life from his children's teeth with any approach to fairness and accuracy. Several conversations with Mr. Hutchinson on this subject have only elicited negative information; he says it is impossible to state what are the indications of slight syphilitic taint upon naturally well-formed teeth. In this address he does not touch upon this section of his subject. He spoke of the "syphilitic fit" or "stroke," where there is a short period of confusion, then insensibility, and then paralysis—may be hemiplegia. This may recur. There is no rupture of a blood vessel, no hemorrhage, but plugging of a vessel as in embolism, only there is no sudden impaction of a floating plug; but there is local disease of a vessel which becomes thrombosed. Low forms of chronic inflammation leading to permanent changes in the posterior columns of the cord occur, and produce the condition known as locomotor ataxia. Such

cases as are syphilitic in origin are more amenable to treatment than those due to non-specific disease of the cord. He holds that there is such a thing as a slow serpiginous form of inflammation which spreads insidiously amongst the nuclei of special nerves and in certain tracts of the spinal cord—the result of syphilis, and curable only by specific treatment. He concludes by saying that syphilis gives permanent proclivity to disease in all tissues, and is confident that the discovery and accurate description of a large number of diseases which are of syphilitic origin will be much helped if we take as our clue the general proposition that syphilis is an imitator. Syphilis may claim position as a detector as well as a most skillful simulator: under its influence the hitherto latent proclivities of the individual are revealed. When epilepsy occurs from syphilis, it happens probably to a man predisposed to epilepsy; and the same of locomotor ataxia, and the like.

Knowing the interest you take in antiseptic surgery, I will briefly abstract for you a paper by Dr. MacEwen, of Glasgow, on Antiseptic Osteotomy. He made a few preliminary remarks on the use of the bone-chisel. For the removal of a wedge of bone, a chisel having the same form as a carpenter's chisel is suitable. The chisel has a straight and a beveled edge; in using the instrument, the straight edge should be kept to the part which is to remain, the beveled edge facing the part to be removed. He uses this osteotome in cases of knock-knee, for the removal of the internal condyle of the femur. In cutting the posterior inner part of the bone, the osteotome should be directed from behind forward so as to avoid injury to the artery. When the operator thinks the bone sufficiently divided, then he applies a sponge saturated with a one-in-forty solution of carbolic acid in water to the external wound, while with the other hand he grasps the limb, and giving it a quick jerk inward, snaps or bends the bone, as the case may be. The wound is dressed antiseptically afterward. The results attained were very satisfactory.

Prof. Maclean, of Netley, has applied the antiseptic treatment to hepatic abscesses. In one case the aspirator had

been used, and had given relief for a day or two, though no pus but only a little blood had been removed; consequently it was resolved to open the abscess antiseptically. A powerful steam generated carbolic spray played on the part, while a full-sized trocar was passed betwixt the ninth and tenth ribs. Twelve ounces of thick creamy-looking pus was withdrawn, and a drainage-tube fixed in; the part was then dressed with carbolized gauze and tow, and secured by a carbolized bandage, the spray playing till the dressing was completed. At every subsequent dressing the same method was carried out with scrupulous care, so as to avoid the entrance of uncarbolized air, while the discharge was received in the carbolized dressing. The wound healed steadily, all pain and tenderness ceased, and he gained flesh. The liver was reduced in size, reaching nearly the normal bulk, and the man was discharged on a pension.

Hepatic abscesses are common at the great army hospital at Netley, and various plans of treatment have been tried there. An extensive trial was given to aspiration, by which temporary relief was furnished in almost every case; but the operation had to be repeated, and in many cases an aggregate of hundreds of ounces of pus was withdrawn at one time and another—in one case, no less than six hundred ounces—until the patients became worn out with the immense discharge and the destruction of the liver substance.

In concluding his remarks, Professor Maclean said:—"The relief of symptoms following the direct removal of a small quantity of blood by the aspiratory instrument at the unsuccessful attempt to find the abscess, is noted. This has occurred to me so often that I have frequently taken occasion to point it out to young medical officers about to go to India, as a promising method in acute cases for cutting short inflammations of the liver, and preventing suppuration. No one has been more urgent against the coarse and unsurgical methods of exploration with large instruments, at one time in fashion, than I have; but with the fine needles and aspiratory instruments now available, the liver may be punctured and blood

abstracted directly from it, without fear of evil consequences, and I believe often with great benefit. The method is, at all events, worth a fair trial in those parts of the world where this important organ is subject to suppurative inflammation." Such a method of treating acute hepatitis is bold, but reasonably founded; while the antiseptic opening of hepatic abscesses is certain to recommend itself to thinking men.

A very interesting case, both for physiologists and physicians, is recorded by Dr. Russell, of Birmingham, namely, a case of anuria, existing twenty days and followed by recovery. It occurred in a man of forty-nine years, a temperate man in good health, but who had suffered from "rheumatism" and gravel for some years. First, there appeared pain in the left loin, and his urine "stopped all at once." Vomiting set in at once, and continued to the end of the attack; it occurred half a dozen times a day, but never exceeded a pint in the twenty-four hours. The vomited matter was sometimes bitter, sometimes sour. The bowels acted spontaneously, or were kept open by seidlitz powders. The stools were not fluid. There were no uremic symptoms, no muscular twitchings, and the pupils were but moderately contracted. There were no mental disturbances, unless it was that the man was somewhat apathetic. Some delirium, principally at night, came in at the twelfth day. The man walked in his garden on the twentieth day. The pulse did not fail. The lower extremities became extremely edematous, at what date is not stated. Throughout the illness he was very thirsty; he drank some brandy, ginger-beer, and champagne freely.

Early in the morning of the twenty-first day of suppression, the patient felt an urgent desire to pass urine, after suffering during the preceding night severe pain in the vesical region. His wife placed a fomentation on the part, after which he fell asleep, almost for the first time during this period. After trying several times unsuccessfully to pass water, urine began to dribble on the carpet. He then called for a half pint tumbler, which he filled five times. After this a calculus was passed. In the succeeding twenty-four hours nine quarts of

urine were passed, and on the following day three quarts. According to his wife's statement the urine was not of the ordinary color of urine, but "silvery white, clear, and very bright." With the reappearance of the urine, the edema, which had extended to the face, disappeared rapidly, and the vomiting ceased at once. The man soon regained his normal state of health.

Where, in the name of wonder, did the fluids taken by this man escape from the body? By what channel? And what came of his urea, and other and more deleterious products of the retrograde metamorphosis of nitrogenized material, waste tissue and other? This is a matter which needs attention. A case is recorded in Ziemssen's *Cyclopædia*, of recovery after anuria lasting thirteen days. Cases ending fatally after twenty days are recorded; but then they ended in death, while this terminated in recovery. Ordinarily after suppression of urine a concentrated urine is passed; but there was nothing of the kind in this case. Where were the compensating actions of the organism? It does not appear that there was any marked sweating, no compensating action by the skin; nor yet any uremic diarrhea. The urea, if stored in the system, did not produce the ordinary symptoms of uremia; the slight delirium being rather the result of want of sleep than due to uremic intoxication. There was a little apathy; but surely a man who is practically without sleep for twenty days on end, may be excused taking a very keen and lively interest in what is going on around him, especially too when he has not made any water all that time. Probably, and very naturally, his interest was absorbed in himself. One could fancy his attention was largely occupied in wondering what was going to happen to him. Though he had passed vesical calculi previously, and had had spells of anuria, there was nothing in his previous experience, after the first twenty-four hours, to enable him to speculate even as to what the result might be. Was he ever going to make water again?—was he to survive or not? These were subjects which were in all probability passing through his mind, though he might be a Staffordshire man

not given to much mental speculation. Perhaps his imagination faintly suggested at times that this freak on the part of his urinary organs was going to make him famous in medical literature. Who knows, in the land where successful ovariectomy and less successful laparotomy took their origin, some speculative mind may see, from the lessons of this case, the possibility of removing the kidneys successfully when a course of whisky is causing a suspicion of the commencement of interstitial nephritis, with cirrhosis looming up in the distance. Oh, Yandell! man of much and multifarious information on many and various topics, tell me—where would Kentucky be without whisky? Not in the van of a great people, but in the static condition of teetotal races. Still, if a man is endangering his kidneys by his affection for the fire-water, which has made the Anglo-Saxon nation what it is, may he not have his kidneys removed, and so be saved? The lesson of the case just related brings such a thing within the sphere of an active imagination.

Reviews.

A Manual for the Practice of Surgery. By THOMAS BRYANT, F. R. C. S., Surgeon to, and Lecturer on Surgery at, Guy's Hospital; Memb. Correspond. de la Société de Chirurgie de Paris. With six hundred and seventy-two Illustrations. Second American, from the Third Revised and Enlarged English Edition. Philadelphia: Henry C. Lea. 1879. 8vo., 945 pp.

That a third edition of so large a work as Bryant's Surgery should be called for in six years after the publication of the first edition, and that it should follow the second edition in little more than two years, is excellent evidence of the merits and increasing popularity of the work. And the strength of this evidence is much increased, when we consider the number of rivals with which it has had to compete. Within the period named, Gross has not lessened in surgical favor, and Hamilton and Ashhurst have come into the field in America; while abroad Erichsen has continuously increased and enlarged his wonderful volumes, and Mr. Holmes, both as the editor of the "System" which bears his name and the author of his separate work, has supplied complete treatises on the surgical art. Billroth, too, has been kept fresh before the English and American professions, by the delightful translation of Dr. Hackley of New York, and later by that of the Sydenham Society. Certainly a third edition of Bryant's Surgery, under such circumstances, in so short a time, carries much meaning with it.

Without entering into any comparison between the merits of Mr. Bryant's treatise and those of the other authors named, we may say that it is thoroughly deserving of the popularity it has achieved. Noting the book as we have done since its first appearance in 1872, through its second edition in 1876, and now in its present shape, we declare, as the result of care-

ful study and constant reference, that it started good, became better, and is to be ranked among the very best of treatises upon surgery which have appeared in the English tongue.

The excellence of Mr. Bryant's treatise is the result of a very happy combination. It is the work of an excellent surgeon, who has for a number of years occupied, as a surgeon to Guy's Hospital, one of the largest fields for observation in the world; it is the work of a student, and, above all, it is the work of a fair-minded man.

"I have endeavored to acknowledge on all occasions the claims of others, and whatever merit or novelty may attach to their views or operations; for my wish has been to represent, not so much my own opinion, as the position of surgery at the time I write."

These are the words of the author when he put forth his second edition; and as he made them good then, so has he not forgotten them under the flattering influences of his increasing favor. The present edition of Mr. Bryant's work "has been carefully revised, much of it has been rewritten, important additions have been made to almost every chapter, and of the six hundred and seventy-two woodcuts eighty-eight are new."

Without stopping to separate the new from the old, and note the changes specially, we prefer to present this general statement, and to review the book simply as it stands.

The order adopted is a very simple one. There is an introductory chapter on the investigation of cases, diathesis, etc. The main work commences with a consideration of Inflammation and its outcomes, with a special chapter on poisoned wounds, which, with a chapter on tumors, makes up the first division of the work. Following this consideration of general surgery, the surgery of the several systems is taken up as follows:—the Cutaneous, the Lymphatic, the Nervous, the Circulatory, the Digestive, the Respiratory, the Urino-Genital, and the Muscular and Osseous Systems. The subject is very well divided in this manner, as can be seen from the subdivisions made under the last head, namely—Affections of the

Muscles, Bursæ and Tendons; Malformations and Deformities; Contusions, Sprains, Wounds, Injuries of Joints, and Dislocations; Fractures; Diseases of Joints; Diseases of Bones; Gunshot Injuries; Anesthetics and Amputations. The consideration of gunshot injuries, and especially the consideration of anesthetics, might have been taken up in any of the subdivisions; but no attempt to subdivide surgery is absolutely exact.

Referring now to special consideration of the work before us, we turn over its pages and select the subjects in rather haphazard manner. Concerning cancer, it is said:—"When the diagnosis is established the tumor should be removed, and the best method doubtless is that of excision." Certainly it would be hard to compress more into a single sentence. Not that we believe excision is always to be practiced, nor does Mr. Bryant, which matter he discusses properly in appropriate places.

Of the treatment of that painful affection "Ingrown Toe-Nail," he says: "When external pressure has been the cause, and ulceration exists, the soft parts may be pressed away from the sharp edge of the nail by the careful introduction, beneath the overhanging integument, of a small roll of lint, which should be pressed down to the bottom of the sore, and be fixed in position by means of strapping applied so as to draw the soft parts away from the nail." Exposing the edge of the nail in this manner, it is elevated by the introduction of *lead*, tin-foil, etc., and the nail allowed to grow up to its normal square form. Partial excision, notching, scraping, etc., are named as temporary expedients only.

In describing the operation of trephining, Mr. Bryant, like all his countrymen, fails to notice Galt's (American) Conical Trephine, the use of which renders three-fourths of the ordinary cautions to be observed with the European instrument useless.

On the following page the author gives, under the head of general conclusions on injuries of the head and their treatment, thirteen laws. These are not only extremely valuable from their truthfulness, but from their method. Such con-

densations of our knowledge are striking to the mind of the reader, and exceedingly useful in practice; and they should always be made where the subject admits of it. We append an example of one of the laws as stated by Mr. Bryant:—"In cases of severe concussion, the brain is at least as much injured by *contre-coup* as it is at the seat of the injury, its base suffering the most. Fracture by *contre-coup* does not take place." Certainly much wisdom well put.

The following is Mr. Bryant's doctrine in regard to the treatment of Intussusception:—"No operation should be thought of, . . . until well considered minor measures have been employed and failed, *care being taken that too much time is not expended in the attempt*. In acute intussusception *but a few hours should be given*." The italics are ours, and placed to call attention to the fact that Mr. Bryant, who is one of the very highest authorities on this subject, is decided in his views in regard to laparotomy in intussusception.

The following is from the chapter on the anus and rectum: "Simple fissures are readily treated by the administration of a laxative, the local application of the nitrate of silver," etc. Black wash in syphilitic cases, and the rhatany injections of Trousseau in some specific cases, are also recommended:—"When a larger ulcer exists, the cause of spasm and pain and is quite recent, the same treatment may be employed; but when the ulcer has existed for any time, and has a hard base, . . . *the division of the base of the ulcer, with the superficial fibers of the external sphincter,*" should be practiced. The deeper division of the muscle is condemned, and the following declaration is made:—"The forcible dilatation of the sphincter, and its laceration with the thumbs in the rectum, as practiced abroad, is a barbarous treatment compared with the above, though when the patient is under chloroform it may be followed."

We might enter into much of a discussion with Mr. Bryant just here. Our experience with nitrate of silver is not the most favorable, and is limited to cases in which the patient

will allow no other means to be tried. The rhatany is useful not only in fissure, but other painful affections of the anus and rectum; but the special point we wish to make is against the condemnation of forcible dilatation as "barbarous." Possibly as practiced by Récamier, its author, it was a painful procedure, resulting in laceration, thrombus, etc.; but just as Brodie and Copland improved the operation of Boyer, by limiting the incision to the superficial fibers, so has the method of Récamier been so far modified in this country at least to be a comparatively painless procedure. The "forcible dilatation" is no longer a feat of brute strength, but is done slowly and gradually; and by this method the thumbs may be made to touch the ischia, without the abrasion of the mucous membrane. Nor is it necessary always to stretch the sphincter so far. Frequently in the slighter cases, the introduction of two or three fingers will give relief. The dilatation of the sphincter is used in many other affections of the anus besides that of fissure. In hemorrhoids it is curative, as declared by Verneuil (and our experience bears out his declaration); in sinuses left after imperfect operations on fistula, it is one of our best means of relief. It has in fact a wide range of usefulness, and it was well to consider the accusation of barbarism made against it. We would like Mr. Bryant to try this method more extensively before his fourth edition is prepared.

Mr. Bryant prefers his own tracheal tube (ball and socket) to that of his colleague, Mr. Durham—whose "lobster-tailed" canula shows so much ingenuity. Mr. Bryant does not stop for venous hemorrhage, but opens the trachea as the best means of stopping it.

We were prepared, of course, for a "go-by" on the plaster-of-paris dressings in the treatment of fractures of the thigh; though we were scarcely prepared to view the ancient long splint received with such favor as is done by Mr. Bryant. He tried Hodgen's suspensory splint for awhile, and in a number of cases; but having obtained more favorable results with his old plan by double splints (*i. e.*, a splint on both legs), with elastic extension, he discarded it.

Mr. Bryant's results are so remarkable, that, entertaining as we do a poor opinion of the long splint, we can only account for them by the belief that we have always expressed—that each one is liable to succeed best with that method in which he is most practiced and best believes. In thirty-one cases Mr. Bryant had eighteen in which no shortening resulted—ten where the shortening was less than half an inch, and in only three did the shortening reach an inch. Certainly, with such results as these—which we do not think have been equaled by the same method, or by any plan practiced elsewhere—Mr. Bryant was justified in discarding the method of our countryman, which for a time had found favor in his hospital. Indeed we might almost say, that if the tape-lines of Guy's Hospital be strictly standard measures, the ordinary thigh would be somewhat improved by undergoing fracture and a treatment in that famous hospital.

We are glad to note that Mr. Bryant is not a believer in special apparatus in Colles's fracture. The observations of Dr. Pilcher, of Brooklyn, upon this lesion, are not noted by Mr. Bryant. They should be in every consideration of the subject hereafter. Any one who has tried his method of reducing the fracture—by the method of dorsal flexion—must be as much pleased at getting a Colles's fracture to treat, as he formerly wished to avoid it.

Concerning hip-joint disease, Mr. Bryant says:—"In a pathological point of view, hip disease differs in no respect from that of other joints, and is not a strumous affection, although it may occur in strumous subjects." Its treatment is considered under that of diseases of the joints generally; and the student will thereby start with very correct notions, and not be haunted through his life with the idea that the disease is *sui generis*, and that its relief depends upon special means. *Passim*, the illustrations on page 824, showing lordosis from hip disease, are particularly instructive.

So much for the special points we have thought best to notice in illustration of our author.

Mr. Bryant has wisely availed himself of the assistance of

others in the preparation of his work. "The Microscopical Anatomy of Tumors," is presented by Dr. Moxon; the chapter on "Diseases and Injuries of the Eye," by Mr. Charles Higgins; "On Dental Surgery," by Mr. Henry Moon, who gives a particularly interesting and useful chapter (on a subject given up, too, entirely by the general surgeon); "On the Affections of the Ear," by Mr. Laidlaw Purves, etc.; and besides the special chapters credited to these gentlemen, Mr. Bryant everywhere in his pages presents authorities in points under discussion.

The illustrations are excellent and the text well printed.

Mr. Bryant's work does him great honor—does his great hospital honor; and stamps its author as a quite worthy descendant in a famous line which includes the great Sir Astley.

We earnestly commend "Bryant's Surgery" to students, who can not start with better principles, and to practitioners, who can not practice on better precepts than are presented therein.

A Clinical Treatise on Diseases of the Liver. By DR. FRIED. THEOD. FRERICHS, Professor of Clinical Medicine in the University of Berlin, etc. In three volumes. Translated by CHARLES MURCHISON, M. D., F. R. C. P., London. New York: William Wood and Co. [Wood's Library of Standard Medical Authors.]

This is a reprint of the new Sydenham Society's edition of Frerichs, in three volumes instead of two, with an index of the whole added at the end of the third volume. But little need be said of this great work of the celebrated German, which has been before the profession for twenty years, and in all that time has been without an equal for all that makes an exhaustive and practical treatise useful. Great advances have been made in the histology, physiology, and pathology of the liver since Frerichs published, but nothing has been produced that supersedes his superb work; and every doctor's library

that does not contain the old edition should have the new, with thanks to its publishers for placing it within the reach of all.

J. F. H.

Transactions of the Pathological Society of Philadelphia. Vol. VII.
Edited by H. C. SIMES, M. D., Lecturer on Histology in the University of
Pennsylvania. Philadelphia: J. B. Lippincott and Co. 1878.

The transactions of this society are always instructive, and this volume opens with a report of cases of compound fracture of the skull occurring in children, by Dr. John Ashhurst, Jr. The cases are interesting, and serve to illustrate some important points in regard to the pathology of head injuries, and how very deceptive often these lesions are. Following this are various reports on pathological specimens relating to the osseous system, digestive apparatus, vascular system, organs of respiration, genito-urinary apparatus, the nervous system and organs of special sense. There are four plates, drawn by Dr. Nancrede, illustrating Dr. Henry's case of extra-uterine pregnancy, and Dr. Pepper's case of *twin* extra-uterine pregnancy.

The Illinois State Medical Register for 1878-79. Published annually by
D. W. GRAHAM, A. M., M. D., Editor. Vol. IV. Chicago: W. T. Keener,
Publisher.

In this little book of two hundred pages one can get much information about the doctors of Illinois. A list of all the regular physicians in the state is given, their address, time and place of graduation. The names of all the national medical associations are given, and their officers; also the names of members of the various county and district medical societies in Illinois. A short history of the various hospitals in the state is given, a list of medical publications, and many other matters of interest.

Clinic of the Month.

THE CAUSES OF INTERMITTING OR PAROXYSMAL PYREXIA.—The late Charles Murchison, M. D., F. R. S., in a clinical lecture which appears in the *London Lancet*, enumerates various causes of intermitting pyrexia. He first calls attention to the most common cause, "malaria." What is of importance as regards diagnosis to know is that the poison may remain dormant in the system for months, or perhaps for years, before showing itself. "A man goes in August to reap the harvest in Lincolnshire, and is there exposed to malaria; but he may not get ague until the following spring, during the prevalence of east wind at his own home. Moreover, a person who has had ague once may continue to have attacks for years after he has left the malarious country, especially during damp weather, and when the wind blows from the east. These facts are of clinical importance, because in any case of intermittent pyrexia, before excluding malaria as the cause, it is necessary to consider not only whether the patient has been recently exposed to malaria, but also whether such an exposure could have occurred months before, or whether the individual had ever in his lifetime suffered from true malarious fever."

Attention is called to a second kind of intermitting fever in certain cases of enteric or typhoid fever. Typhoid fever is usually remittent, but Dr. Murchison has known rare cases of enteric fever commence with all the phenomena of malarious ague. Again, a diagnosis may be difficult in certain cases of relapsing or "famine fever," which is essentially an intermittent fever, and in an ague district very likely to be mistaken for malarious intermittent.

Pyemia is a frequent cause of intermitting pyrexia. The paroxysms, though often irregular, are at other times remarkably periodic; sometimes only recur after an interval of days;

at others they are quotidian; while in some instances there may be more than one paroxysm in the twenty-four hours.

“Pent-up pus, independent of pyemia, is not an uncommon cause of intermitting fever, the paroxysms of which are characterized by rigors, heat and sweating. That there is no pyemia is shown by the immediate and permanent cessation of the fever which often follows the evacuation of the pus; while a subsequent rise of the temperature is a certain index that the pus is not properly draining away. Thus, you have seen in our wards paroxysmal fever in empyema, in accumulations of pus in the pelvis of the kidney, in abscesses in the neighborhood of mucous surfaces, etc. But one of the best illustrations of the fact to which I am now adverting, and also of the difficulty in distinguishing the fever from pent-up pus from that from malarious ague, is tropical abscess of the liver. This is often latent, so far as local signs are concerned; there is no obvious enlargement, pain, or tenderness of the liver, and the only evidence of its presence may be paroxysms of fever characterized by rigors, heat, and sweating, and sometimes periodic. The difficulty of diagnosis of these cases from malarious ague is further increased by the circumstance that patients with tropical abscess of the liver have usually been exposed to the ordinary causes of malarious fever. In several instances I have been consulted by patients for what they have believed to be a malarious ague, in whom the real cause of the fever has turned out to be an abscess in the liver. In all cases of supposed ague, where antimalarious remedies fail to check the paroxysms of fever, the possibility of there being a latent abscess in the liver ought to be considered, and the suspicion of hepatic abscess will be almost converted into a certainty should the patient have been in the tropics, and have a history of dysentery, and should no other cause of fever be discovered.”

Ulcerative endocarditis now and then gives rise to an intermitting fever, which may recur daily for weeks or even months, and yet where neither during life nor after death can any evidence of purulent deposits be discovered.

“Tuberculosis, in its early stage, is often attended by an intermitting or sometimes a remitting fever. The fever and consequent exhaustion in these cases are often severe out of all proportion to the amount of discoverable local mischief; and, what is more to the point, the fever may exist for many weeks before any local signs of tubercle can be discovered at all. I have repeatedly been consulted in cases of this sort, on the supposition that the patient was suffering from either enteric fever or malarious ague, and where, on the one hand, the persistence of the fever over a month, and on the other the failure of quinia to check the paroxysms, had thrown doubts on the original diagnosis, and had led to further advice being solicited.”

Other diseases cited which exhibit an intermittent pyrexia are lymphadenoma, syphilitic fever, urinary intermittent fever, hepatic intermittent fever, and intermittent fever from the use of morphia.

EFFECTS OF STRYCHNIA ON THE BRAIN, SPINAL CORD AND NERVES.—From an exhaustive article on the above subject by Dr. E. C. Spitzka, in the *Journal of Mental and Nervous Diseases*, April, 1879, we take the following summary:

1. Strychnia is a poison to all forms of animal life.
2. Strychnia exercises its influence upon animals by affecting the central nervous apparatus and the vaso-motor system, but it can act fatally on animal forms possessing neither of these systems, and must therefore be considered as acting lethally on all complex tissues.
3. Strychnia acts on the gray matter, on all gray matter alike, and affects both its sensory and motor elements.
4. The white nervous matter and the peripheral nerves play but the passive rôle of conductors.
5. Strychnia does not affect the nerves or muscles locally.
6. It affects the peripheral end organs of special sense locally.
7. Strychnia produces tonic spasm in all vertebrates.
8. In higher vertebrates, clonic spasms are added.
9. This difference between higher and lower vertebrates in

this respect is probably due to the difference of the nervous system.

10. The clonic spasms are more intense, *cæteris paribus*, in smaller than in larger animals.

11. In higher animals the spasms are due to the action of the alkaloid on the axial parts of the nervous system, the pons, medulla and cord.

12. The maximum of the tetanizing influence is intra-cranial, and thence it gradually diminishes toward the posterior extremity of the cord.

13. Strychnia kills the lower vertebrates directly by nervous exhaustion; the higher, as a rule, by asphyxia and venous congestion of the nervous system in addition. In very large doses it is directly lethal to the nervous tissues.

14. Its vaso-motor effect is to increase the blood pressure, and the rapidity of the blood current, by contracting the arterial vessels. This effect is independent of the central nervous system.

15. Its effect on the heart is to augment the systole and prolong the diastole; the heart may cease acting by tetanic rigidity in any stage. These effects are produced first by the action of the alkaloid on the local ganglia of the heart; secondly, through the pneumogastric nerve.

16. In large doses, cortical (epileptiform) spasms are presumably produced.

17. Strychnia is present in every organ of the body, after administration; it is found in all parts of the brain, cord and nerves.

18. It is in greater quantities in the gray than in the white nerve tissues.

19. It produces no visible changes either in the nerve fibers or nerve cells, whether given for a short or a long period.

20. Lesions are found after death from strychnia, which are not due to its direct local effect, but to secondary results.

21. Chronic permanent lesions are produced in the course of chronic strychnia tetanus, which are also referable to secondary influences.

22. There is no true antidote to strychnia, although various agents which diminish reflex excitability, and paralyze the muscles, or alter the tonus of nerve fibers, may enable an animal to survive the effects of otherwise fatal doses. But these means fail with larger doses.

23. Strychnia increases the reflex excitability, but not all strychnia spasms are due to this factor: some depend upon direct irritation of the motor cells.

24. As with other irritant toxic agents, the lethal effects are preceded by a stage of functional stimulation.

POSTURE IN STRANGULATED AND INCARCERATED HERNIA.—In a paper on this subject read before the New York Academy of Medicine, by Dr. Frank H. Hamilton (Medical Record, May 24), these conclusions are deduced:

1. Hernial apertures are not under control of the muscles.
2. Posture does not relax the apertures when the seat of the hernia is in the sac itself, nor when it is at the internal ring in inguinal hernia.
3. Neither warmth nor cold, nor any other sort of local application, are capable of relaxing these apertures.
4. Neither do chloroform or other anesthetic affect hernial apertures, except in cases where the hernia is very recent.
5. In short, hernial apertures can seldom be affected at all by any means brought to bear upon them, whether local or general; but this is not requisite for relief, since the strangulation is not the result of contraction of these apertures, but of the pressure of the distended hernia upon them.

A second series of conclusions in regard to the postural method of treatment was as follows:

1. Taxis is of prime importance.
2. Internal traction is only second to this in value. It is to be effected by securing the paralysis of the abdominal muscles and exciting peristalsis in the intestine.
3. Chloroform, hot baths, and other similar agents are the best means for accomplishing muscular relaxation, peristalsis, and anti-peristalsis.

4. Ice can only relieve the "button-holing" when this is due to congestion, and when it is applied very early. Opium is also of a somewhat limited application.

5. Emetics may be of service by causing an upheaval of the viscera, and also probably by exciting peristalsis.

6. Purgatives act by causing peristalsis above, and anti-peristalsis (sometimes) below the seat of stricture.

7. Stimulating enemata and enemata of tobacco also induce peristalsis, and are both direct and indirect in their effects.

8. All positions of the patient are beneficial in which the viscera are drawn upward; and that is likely to be of the most service which causes the most efficient inward traction, at the same time that it does not interfere with the application of taxis.

DIAGNOSIS OF LESIONS OF THE CORTEX CEREBRI.—Dr. Maragliano (*Sulla Sintomatologia delle Lesioni Corticali della Zona Motrice, Reggio Emilia, 1878*) argues that we have means of distinguishing a lesion of the cortex cerebri from one of some other parts of the brain. He thinks that convulsions arising from injuries to the cortex are generally unilateral or restricted to one limited group of muscles. After the cortex cerebri, the centrum ovale is thought to be the only one that gives origin to localized fits; but we are in want of instances of such fits resulting where the overlying gray matter is unaffected. After diligently searching medical literature, he can not find a single example of partial epilepsy which is not owing to a lesion of the cortex. The loss of consciousness comes on late or not at all, and the paralysis appears gradually and is circumscribed, or there is hemiplegia of one side coming on gradually. The paralysis is soon followed by contractions, or is associated with aphasia, having the character of amnesia or verbal ataxia, or of verbal paralysis. There is a slight rise of temperature in the paralyzed limb, and if there be a localized pain in the one part of the head, either spontaneous or brought out by percussion, then the diagnosis of a cortical lesion can not be doubtful. (Brain, April, 1879.)

Notes and Queries.

DANVILLE, April 14, 1879.

My dear Parvin: This ancient city, which its inhabitants are pleased to term the "Athens of the West," has passed through the most notable day of its existence, since seventy years ago Ephraim McDowell devised and first successfully executed the operation of ovariectomy within her borders. Besides its own cultivated and refined population, it is crowded with doctors in attendance upon the annual meeting of the State Medical Society, and with strangers from distant places who have congregated here to witness the ceremonies of the great occasion. The governor and the state officials are here. Your own state sends a goodly delegation. Stevens and Whitaker are here from Ohio. The venerable Dr. Kimball has come from the "Granite State" to listen to the great Pennsylvanian discourse upon the ashes of the Father of Ovariectomy, and to lay at the feet of McDowell a list of two hundred and fifty cases, in illustration of the success of the great operation. Sayre, the President elect of the American Medical Association, came, offering the homage of the profession of America. The proceedings of the society, which were of more than ordinary interest both yesterday and to-day, seemed dwarfed by the one great event which the vast concourse had assembled to witness. The orator originally selected for the occasion was Washington Atlee. Ere he had commenced his lofty task, he was called to join, in the better land, him whose footsteps he had followed with such fidelity. Dr. Gross was then chosen, and though not himself particularly distinguished in the field of ovariectomy, yet a better selection, nor one to give greater satisfaction to Kentuckians, could not have been made. The venerable speaker stood before the largest audience ever

assembled in Danville. It represented the very "rose and expectancy" of the state. I need not say that the address was prepared in that careful, painstaking way which characterizes everything that Dr. Gross writes; nor that it was listened to with the most interested attention from the beginning to the close. I wish we had room in our pages to produce it entire. The society intends issuing a very large edition of its transactions, to contain the oration and other speeches incident to the occasion; whereby such as are specially interested can be supplied. I think, perhaps, we had better publish it as a supplement for the July number anyway. Such an address on such a theme can but be productive of good. No doctor can read it without thinking the better of his calling. I can not refrain from introducing here a single paragraph, which will serve to illustrate the manner in which Dr. Gross handled his subject, and also as containing a warning to a class of surgeons, of which, alas! this part of the country affords more than one example:

"McDowell was not only a good operator, but he possessed all the higher attributes which go to make up the character of a great surgeon—intense conscientiousness and a scrupulous regard for the welfare of his patients. He never operated merely for the sake of operating. He had always an eye to consequences. For the mere mechanical surgeon he had an immitigable contempt. In speaking of ovariotomy, in answer to some strictures pronounced upon his first three cases, he expresses the hope that no such surgeon will ever attempt it. 'It is,' he adds, 'my most ardent wish that this operation may remain to the mechanical surgeon forever incomprehensible.' He considered the profession of medicine as a high and holy office, and physicians as ministering angels, whose duty it is to relieve human suffering and to glorify God. He had a warm and loving heart, in full sympathy with the world around him. To the poor sick he was particularly kind. He was a loyal and devoted husband, a tender and loving father, an honest, high-toned citizen. In all the relations of life he was a model. Naturally of a lively, social disposition, he enjoyed a good joke or a spicy anecdote, and was the delight of every social entertainment that he honored with his presence. Late in life he devoted much of his leisure to reading and meditation. His favorite medical authors were Sydenham and Cullen; his literary, Burns and Scott. During his sojourn in Scotland he passed several of his vacation months in rambling over the country in trying to make himself familiar with the nature and habits of the peasantry. In these perambulations he had the society of two Kentucky friends, Drs. Brown and Speed, the former of whom became

afterward Professor of Medicine in Transylvania University. When the trio reached their home some one asked Brown, 'What do you think of McDowell?' 'Think of him? Why he went abroad as a gosling and has come back as a goose.' It would be well if our country had more of such birds!"

At the close of the oration letters were read, among others from Mr. Spencer Wells, who says:—"I don't know anything which would give me so much gratification as doing honor to the memory and merits of McDowell, and visiting your state. I live in hopes of crossing the Atlantic again, before I join McDowell and the 'nations under ground.' But I should like to complete the roll of one thousand complete ovariotomy cases before I visit America again. Now my list stands at nine hundred and thirty-seven. Five have died and thirty-two recovered of the thirty-seven cases of my ninth hundred."

Mr. Knowsley Thornton writes:—"I wish your gathering all success, and especially as it is a part of the programme to do honor to the great Father of Ovariotomy. I shall hope, at some future time, to make a pilgrimage to the shrine you are about to consecrate."

Mr. Thomas Bryant wrote:—"I only wish I could accept your very kind invitation, for I know of nothing which would give me greater pleasure, or from which I should gain greater profit. It is my full intention to pay you a visit at some future time, and shake by the hand again many of those I have been fortunate enough to meet this side the Atlantic, and many more whose names are household words with us—for we take as much notice of your work, as you do of ours."

The next extract you will recognize as your own:—"It is well, in the name of American surgery and in the name of a common philanthropy, that this honor, though tardy, should be paid to the memory and fame of Ephraim McDowell."

Professor T. G. Richardson wrote in the following eloquent strain:

"As a Kentuckian, no less than as a surgeon, I have always felt the deepest interest in his history, and have sought in his life and surroundings to penetrate to the origin of the great thought and still greater courage that gave expression to the thought, which, without the sanction of precedent, and unaided by the advice or sympathy of others, culminated in the institu-

tion of an operation by which thousands of women, heretofore doomed to early death, now live to bless his name. . . . I would not derogate, in the slightest degree, from the deserved honor which belongs to many who have followed their profession with equal zeal and earnestness, and who have added largely to the resources of the healing art; but in the inscrutable wisdom of the Creator of all things, it has not been given to any other single laborer in the field of medicine and surgery upon this western hemisphere to confer so great a blessing upon the human race. All honor, then, to the memory of Ephraim McDowell, the man of genius, the wise heroic surgeon, the benefactor of his kind. When the granite shaft which you have erected to signalize what he was, and what he did, shall have fallen into decay, his name will still be perpetuated by the many lives saved through his instrumentality."

Professor T. Gaillard Thomas said:

"Kentucky cherishes the memory of many noble sons, but nowhere in her annals can she point to a name more deserving of her pride than that which will adorn the monument erected to commemorate McDowell's glory. Others have given her the proud records of the warrior, the statesman, the philosopher, and the philanthropist. McDowell, favored by God above other men, has already bestowed upon humanity more than forty thousand years of active life, and insured for the future results which will surely dwarf those of the past. The noble tribute which you erect in his honor will last long; but it will crumble into dust and be scattered abroad by the winds, while his memory still lives green and vigorous in the hearts of a grateful posterity."

The poet laureate of Boston, Prof. Oliver Wendell Holmes, writes in his characteristic way:

"I feel a personal interest in the surgical conquest which is to be commemorated, in addition to that which all the world recognizes. Among the births of the century this is a twin with myself. Dr. McDowell's first operation dates from the same year as that in which I first inhaled the slow poison that envelops our planet, the effects of which I have so long survived. I thank God that the other twin will long outlive me and my memory, carrying the light of life into the shadows of impending doom, the message of hope into the dark realm of despair; opening the prison to them that are bound and giving them beauty for ashes—the beauty of a new-born existence, even it may be, as I have but recently seen it, of youthful and happy maternity, in place of the ashes for which the inevitable urn seemed already waiting."

After the foregoing extracts had been read, Professor Sayre being called on, spoke as follows:

"No word from me can add a single laurel to the crown of the immortal McDowell, whose history and services to mankind have been so beautifully and truthfully portrayed by the distinguished orator of the evening—the Nestor of American surgery—Professor Gross. In fact any remarks from me

in my individual capacity would seem almost inappropriate. But in my official capacity, as President of the American Medical Association, it is my duty as well as my pleasure to bring to the monumental shrine the ovations of the entire medical profession of these United States. And, sir, I venture here the prediction that in all time to come the intelligent surgeons, either in person or in thought, from every part of the civilized globe, will wander here to Danville to pay their respects and sense of obligation to the memory of Ephraim McDowell, who has contributed more to the alleviation of human suffering and the prolongation of human life than any other member of the medical profession in the nineteenth century. We can scarcely comprehend the greatness of this man's mind, and the truly wonderful genius of McDowell, until we stop to consider who he was, what he did, and when and where he did it. A village doctor in the backwoods frontier, surrounded by Indians and the buffalo, almost beyond the bounds of civilization, with no books to refer to, with no precedent to guide, with no one to consult but his own unaided judgment, with no one to share the responsibility if unsuccessful, unaided and alone assumes the responsibility of removing a disease which up to that time had been considered absolutely incurable. Think for a moment what would have been the result of failure—a coroner's jury and a verdict of willful murder—which at that time would have been pronounced correct by the entire medical profession throughout the civilized globe. All this he dared and did assume, because his clear intellect had reasoned out his plan of procedure, and his careful dissection had pointed out to him the path to victory. And now every intelligent surgeon in the world is performing the operation as occasion requires, until at the present time, as Dr. Thomas has stated, forty thousand years have already been added to the sum of human life by this one discovery of Ephraim McDowell.

“Another fact strikes me very forcibly, and that is, the heroic character of the woman who permitted this experimental operation to be performed upon her. The women of Kentucky in that period of her early history were heroic and courageous, accustomed to brave the dangers of the tomahawk and scalping-knife, and had more self-reliance and true heroism than is generally found in the more refined society of city life; and hence the courage of Mrs. Crawford, who, conscious that death was inevitable from the disease with which she suffered, so soon as this village doctor explained to her his plan of affording her relief, and convinced her judgment that it was feasible, immediately replied, ‘Doctor, I am ready for the operation; please proceed at once and perform it.’ All honor to Mrs. Crawford; let her name and that of Ephraim McDowell pass down in history together as the founders of ovariotomy.

“Kentucky has many things to boast of—in climate, soil, and magnificent forests of oak, carpeted with her native blue grass, far surpassing in beauty and grandeur the most elegantly cultivated parks of England. She is famed for her beautiful and accomplished women; she is renowned for her statesmen, her orators, and her jurists—her Clays, her Johnsons, her Wickliffes, her Crittendens, her Marshalls, her Shelbys, her Prestons, her Breckinridges, and

a host of others; but no name will add more to the luster of her fame than the one whose name we this day commemorate by erecting this monument to Ephraim McDowell, the ovariotomist."

The most touching event of the evening was the presentation to Dr. Gross by the society, through Dr. Cowling, of McDowell's door knocker. The manner in which Prof. Cowling delivered his simple address will not soon be forgotten by those who were present. For beauty of sentiment and purity of English, it could not well be surpassed. Dr. Cowling said:

"Dr. Gross, the Kentucky State Medical Society thanks you for the beautiful oration you have just delivered on Ephraim McDowell. Surely hereafter, when history shall recall his deeds and dwell upon his memory, it shall relate how, when he was fifty years at rest, the greatest of living surgeons in America came upon a pilgrimage of a thousand miles to pronounce at his shrine the noble words you have spoken. The society does not wish that you should return to your home without some memento of the occasion which brought you here, and which shall tell you also of the admiration, the respect, and the affection it ever bears for you. I have been appointed to deliver to you this simple gift, with the trust and the belief that it will always pleasantly recall this time and be a token of our feeling toward you. We wished to give you something directly connected with McDowell, and it occurred to us that this little memento of the dead surgeon would be most appropriate. It is only the knocker which hung upon his door, but it carries much meaning with it. The sweetest memories of our lives are woven about our domestic emblems. The hearthstone around which we have gathered, the chair in which our loved ones have sat, the cup their lips have kissed, the lute their hands have swept—what jewels can replace their value? Do you remember the enchantment that Douglas Jerrold wove about a hat-peg? How at the christening of the child they gave it great gifts of diamonds and pearls and laces; and when the fairy godmother came, and they expected that she would eclipse them all with the magnificence of her dowry, how she gave it simply a hat-peg? They wondered what good could come of that. The boy grew to be a man. In wild pursuits his riches were wasted, and at last he came home and hung his hat upon that peg; and while the goodman's hat was hanging there peace and plenty and order and affection sprang up in his home, and the hat-peg was indeed the talisman of his life.

"I wish that the magician's wand were granted me awhile to weave a fitting legend around this door knocker which comes from McDowell to you, Dr. Gross. There is much in the emblem. No one knows better than you how good and how great was the man of whom it speaks. It will tell of many summons upon mercy's mission which did not sound in vain. Ofttimes has it roused to action one whose deeds have filled the world with fame. A sentinel, it stood at the doorway of a happy and an honorable home, whose

master, as he had bravely answered its signals to duty here below, so when the greater summons came he as trustfully answered that, and laid down a stainless life.

"It belongs by right to you, Dr. Gross. This household genius passes most fittingly from the dearest of Kentucky's dead surgeons to the most beloved of her living sons in Medicine. She will ever claim you as her son, Dr. Gross, and will look with jealous eye upon those who would wean you from her dear affection. And as this emblem which now is given to you hangs no longer upon a Kentucky doorway, by this token you shall know that all Kentucky doorways are open at your approach. By the relief your skill has wrought; by the griefs your great heart has healed; by the sunshine you have thrown across her thresholds; by the honor your fame has brought her; by the fountains of your wisdom at which your loving children within her borders have drunk, the people of Kentucky shall ever open to you their hearts and homes."

In these remarks, which could not have occupied more than five minutes in their delivery, Dr. Cowling placed himself in the front rank of speakers in Kentucky.

Dr. Gross rose, and with visible emotion said:

"I am much overcome, gentlemen of the Kentucky State Medical Society, by this mark of your approbation. I am not the great man your speaker has declared me to be, but I gratefully appreciate the feelings that have prompted his words. I claim to be but an earnest follower of Surgery who, during a period which has now extended beyond half a century, has striven to the best of his ability to grasp its truths and to extend the beneficence of its offices. I am not to be placed by the side of McDowell for what I may have done in our art; but if this reward be a measure of the appreciation I hold for the good-will of the people of this commonwealth, I may claim it for that. The years of my life which I passed in Kentucky represent the most important era in my career. They witnessed many of its struggles and much of the fruition of its hopes. To the warm hearts of the many friends it was my good fortune to secure within these borders do I owe it that those struggles were cheered and rewards beyond my deserts were secured. I take this emblem now offered me as the most valued gift of my life. It shall be received into my home as a household god, environed by all the memories of goodness and greatness to which your speaker has referred, and above all recalling this scene. Dying I shall bequeath it, among my most important possessions, to the family that I may leave, or in failure of that, to be preserved in the archives of some society. I thank you again, gentlemen, and I wish I were able to tell you better how much I thank you."

And with this the exercises closed.

The credit of originating the idea of erecting a monument to McDowell belongs to the late lamented Jackson, whom we knew and loved so well; but the real work of organizing the plans which ended in the consummation of the work, was

done by Dr. Lewis McMurtrie, once a pupil, then a partner and lifelong friend of Jackson, now his most worthy successor to the confidence and esteem, respect and affection of the people among whom they lived.

The following extract, descriptive of the monument, is taken from the delightful letter of Dr. Whittaker to the Cincinnati Lancet and Clinic:

“On the front face of it is a medallion of McDowell, and beneath it a tablet with the inscription, ‘A Grateful Profession Reveres His Memory and Treasures His Example.’

“On the remaining tablets, on the different sides, are further inscriptions, as follows:

“‘Beneath this Shaft Rest the Remains of Ephraim McDowell, M. D., the Father of Ovariectomy. By Originating a Great Surgical Operation He Became a Benefactor of His Race, Known and Honored Throughout the Civilized World.’

“‘Born in Rockbridge County, Virginia, 1771; Attended the University of Edinburgh, 1793; Located at Danville, Ky., 1795; Performed the First Ovariectomy, 1809; Died, 1830.’

“‘Erected by the Kentucky State Medical Society, 1879.’”

I must reserve for another time mention of the work done at the society, and have now but space to add that Dr. R. W. Dunlap, of Danville, a well known practitioner and estimable gentleman, was elected president. The next meeting of the society is to be held at Lexington.

Very faithfully,

D. W. Y.

THE AUGUSTA BARBECUE.

My dear Parvin: Did you ever attend a Georgia barbecue? No? Well, then, I will tell you about one, that you may regret your lost opportunity. So many honors were rendered to you at Atlanta, you should I think be made to feel a little sad, for the comfort of those of us who, in

— “That beautiful land,
The far away home of the tick and the chigger,”

were hardly seen save by reflected light. I hope to produce such an effect upon your gustatory nerves, as to cause you to exclaim—

“Send me, ye gods, a whole hog barbecued.”

On Friday evening, after the adjournment of the Association, about twenty-five members with their ladies, under the direction of broad-shouldered and genial Dr. H. C. Campbell, boarded a special train in charge of Dr. Hunt, of the Georgia Railroad, and soon were *en route* for Augusta. After a night of sleep, filled with dreams of the coming "to-morrow," the city was reached at seven o'clock in the morning. At the depôt the party was taken in charge by the reception committee, and escorted in carriages to the residences of various physicians for breakfast. At ten o'clock an assembly was made in front of the Central Hotel, where a line of carriages was waiting. Accompanied by the reception committee, the visitors rode through many of the broad and beautiful streets of the city, that are so handsomely shaded by live oaks and elms, through the magnolia-lined avenues of the cemetery, and thence to Summerville. At the Augusta Arsenal a delightful reception was given by General Callender, a bountiful supply of refreshments having been provided for the guests. This pleasant episode in the drive was enjoyed by all.

At twelve o'clock the party returned to the city, and proceeded to the canal basin, where Commodore Armstrong's steam fleet was in waiting to convey it to the "Locks," some ten miles distant. About two hundred citizens, including many ladies, accompanied the guests. The boats were provided with music, and moved off to the air of "Dixie." Near the banks of the canal, there was suspended from some large manufacturing establishment an immense American flag, having upon it in large letters, "To the M. D.'s of the United States, Welcome." This was loudly cheered.

"The Locks"—a most charming spot—was reached at two o'clock. The party disembarked, strolled about the banks, and inspected the mysteries of "barbecue" cookery. On the spits were pigs, sheep, kids, lambs, and heaven only knows—and perhaps the sable cooks—what else; the whole giving forth an appetizing odor, far surpassing that so eloquently described by Charles Lamb in his "Dissertation on Roast Pig." Very soon the summons to dinner was given. The

spread was one of the most bountiful that we have ever seen. There was the greatest profusion of everything, as you will see from the following *mênu*, elegantly printed on satin—— On second thought I will have a little mercy on you, and not send you the entire bill of fare—you who existed for a week on the thin “grub” of the Kimball House, and could not enjoy the delicacies at the entertainments in Atlanta because of a fear of being called upon to make a speech! [I learned at this dinner how this fear spoils one’s appetite. “For the soul of me I couldn’t eat.” I was not called on for a speech, after all.] There was shad chowder, all the barbecued meats before mentioned, deviled terrapin—that was as hot as the adjective signifies, vegetables, fruits, etc.; with champagnes, clarets, a variety of liquors—and a *little* water to wash them down.

The guests and citizens were seated around two long tables set in the “gate-house;” Rev. William B. Walker performed the religious exercises usual on such occasions. After which Dr. Campbell welcomed the visitors in an appropriate manner, and introduced Hon. John S. Davidson, who said:

“In behalf of the City Council of Augusta, and in the name of all our people, I give you an earnest and hearty welcome to our hearts and homes. I speak these words of greeting with knowledge of the fact that they have fallen upon your ears from other lips, and amid, perchance, more attractive scenes; but I am possessed with an abiding faith, that from no one, at any time or in any place, have they been more profoundly earnest or more honestly sincere. . . . At your feet is laid an expression of hospitality which, while essentially Southern, is high and deep and broad enough to embrace all parts of our common country, in whose prosperity and well-being all feel a patriotic interest. The pleasure to which you come—a Southern barbecue—is so cosmopolitan in all its parts, that it has never needed *reconstruction*. It will tickle the palate of him who comes from the frozen lakes of the North, and leave behind the odor of pleasant memories to the dwellers by the southern seas.”

After further remarks abounding in wit and eloquence, he concluded as follows:

“Once more I bid you welcome—welcome for the sake of the noble profession you represent, whose members in times of pestilence and danger win crowns, compared with which the laurels that a Cæsar reaps are weeds. Welcome, because we feel honored by your coming; and thrice welcome, for the reason that our people value merit wherever it is found—are glad to stand with uncovered heads in the presence of those who illustrate by their life-calling the exalted virtues of self-sacrifice, patriotism and benevolence.”

This speech was frequently applauded. On its conclusion, the party turned their attention to the substantial part of the business, and did full justice to the viands and fluids before them. When it was apparent that everybody was satisfied, Dr. Campbell proposed “The health of our visitors,” and called upon Governor Garcelon of Maine to respond. The governor, being a believer in “total abstinence,” had not forgotten the snow and ice of his Northern home, and therefore was not entirely “thawed out” on this occasion. Still he made a very good speech, barring the political allusions that crept into it.

Dr. Post, of New York, responded very happily to the toast, “The Empire State of the South to the Empire State of the North.” He said:—“I am unprepared to respond to such a toast. I am reminded of the story told of the son of the Emerald Isle who, when he saw the Siamese twins, said, ‘it was fortunate that they were brothers.’ We are here from remote parts of the country, but it is a fortunate thing that the same blood flows in our veins, and that in all essential things we are brothers, whatever our politics may be. I can not express my feelings for the unbounded hospitality we have received, and the admiration we have in our hearts for the citizens of the South.”

Gen. E. P. Alexander, president of the Georgia Railroad, was called upon and made a fitting response.

I hardly think that any more speeches were made. This uncertainty I hope you will attribute to its proper cause. I

was not full of champagne, but of the speech I did not make; and regret that I got no honor out of it, nor comfort out of the good things it kept out of my stomach. I think we all missed your eloquence on the occasion.

After dinner, there was dancing and a general good time.

I don't know how many of the doctors were grievously wounded by shafts from the sparkling eyes of Augusta's beautiful women. I was struck—but you know my wife was along, so I gave no sign of being hurt. One of the party—Dr. Quimb—, he of the queerish name from the sands of New Jersey—was badly wounded. Doubtless the solution of some of his conundrums is still vexing the brain of some of his fair entertainers.

On the way back to the city, an impromptu meeting of the visitors was held, of which Governor Garcelon was chairman, and Dr. E. S. Dunster, secretary. Various resolutions were passed, tendering "thanks for the kind reception accorded us," and expressing a "desire to reciprocate, with right hearty good will, the courtesies and hospitalities so unanimously and generously heaped upon us."

Among all the visitors present there was, I think, but one regret, and that was that so small a number of the members of the Association accepted the invitation to Augusta. Perhaps Dr. Campbell's explanation was the correct one. When he was asked why so small a number had accompanied him, he replied, "I brought the brains of the Association to Augusta, and left the heels to dance at Atlanta." The citizens were evidently disappointed, as they expected and had prepared for a much larger number. Have I made you sorry, my friend, that you were not with us? J. R. W.

THE AMERICAN MEDICAL ASSOCIATION.—Dr. Yandell's history of the dedication of the McDowell Monument, and Dr. Weist's narrative of the Augusta entertainment, more than compensate for the absence of a notice of the Atlanta meeting of the American Medical Association; that notice will appear in the July number.



